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**What is the relationship between schools and the demands of paid work? A case study of Rover and its partnership with Swindon schools highlighting the aspects of key skills**

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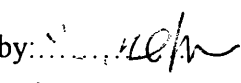
What is the relationship between schools and the demands of paid work? A case study of Rover and its partnership with Swindon schools highlighting the aspects of key skills.

Submitted by **Yadollah Mehralizadeh**  
for the degree of Ph.D.  
of the University of Bath  
1999

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## ABSTRACT

What is the relationship between schools and the demands of paid work? A case study of Rover and its partnership with Swindon schools highlighting the aspects of key skills.

This thesis revisits the debates that took place from the mid-seventies to the early eighties on theories concerning the education-economy relationship. The main theories highlighting the links between education-economy are: the orthodox technological-functionalist theory (Kerr *et al*, 1960); the human capital theory (Schultz, 1961; Becker, 1964; Sobel, 1978); the conflict theories (Bowles and Gintis, 1976; Hickox and Moore, 1992; Collins, 1979; Bourdieu and Passeron, 1977; Carnoy and Levin, 1985; Gordon, Reich, and Edwards, 1975; Braverman, 1974); the contingency theories (Fuller and Robinson, 1992, Robinson and Browne, 1994 and Ashton and Green, 1996); and the modified Weberian theory (Brown and Scase, 1994). In the post Second World War period the Fordist system of production remained the most common means of production until the mid seventies when it faced several problems. In socio-economic and political terms this period of post-war growth, which is characterized by the Fordist regime of accumulation and mass-production, Keynesian welfare-state intervention combined with relatively high wages and unionization, was succeeded by a period during which more 'flexible' production arrangements became the norm. In comparative political economic theories, this shift has been defined as a shift from Fordism to neo- and post-Fordist systems.

The focus of this study is the relationship between education and economy in light of the development of the 'post-Fordist' economy. In these times of rapid change it is obviously crucial to understand how education can best be adapted to meet the needs or requirements of employers. I have used a case study approach to ascertain to what extent education has kept pace with the changing forms of organisation and

consequent skill demands in industry. The case study attempts to answer the following questions: how has the organisation of work changed in recent decades; which key skills does industry require; is there consensus amongst the stakeholders in schools and industry about the nature of key skills; what are the functions of key skills in neo- and Post-Fordist organisations; are key skills organisation specific or are they transferable within various fields; can key skills be taught, and if so how can the changing key skill demands of industry be communicated to schools. The case study reveals that in terms of key skills there is some tension between education and industry partly because schools are wary about teaching new skills when the demand for academic achievement based on league tables is so high. This tension also arises as the role and value of key skills in production remains unclear even in a leading edge company like Rover.

#### IV

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Part One:

Theory and Methodology of the Research

## **1 Research problem**

### **1.1 Introduction**

During the period of the middle seventies to early eighties there was a rapid development of a series of rival theories concerning the nature of the relationship between education and economy. This thesis revisits the debates about these and seeks to re-evaluate them in the light of present economic changes. The main questions related by these theories are, firstly, what are the socio-economic functions of education and training for industry and society as a whole? This is related to the role of education in development, productivity, upgrading skills and the degree to which it acts as a mechanism of social class control and reproduction. Secondly, to what extent does industry need learning, skills, and knowledge to be effective and how do they utilise skills in practice?

The main theories of links between education- economy can be described as: orthodox technological-functionalist theory (Kerr. *et al.*, 1960); human capital theory (Schultz, 1961; Becker, 1964; Sobel, 1978); conflict theories (Braverman, 1974; Gordon, Reich, and Edwards, 1975; Bowles and Gintis, 1976; Bourdieu, 1977; Collins, 1979; Carnoy and Levin 1985; Hickox and Moore, 1992); contingency theories (Fuller and Robinson, 1992, Robinson and Browne, 1994 and Ashton and Green, 1996); and a modified Weberian theory (Brown and Scase, 1994).

Technological-Functionalism assumed optimistically that technology would lead to an upgrading of the skill level of jobs. According to this theory two processes are involved: (a) the proportion of jobs requiring high skill increases and proportion of jobs requiring low skills decreases; and (b) the same jobs are upgraded in skill requirement. Therefore, educational requirements for employment constantly rise, and increasingly larger proportions of population are required to spend longer and longer periods in school. This idea has been supported by the functional modernisation theories of education and the economy (Parsons, 1959; McClelland, 1961; Dreeben, 1968 and Inkeles and Smith, 1974). The functional theory of modernisation claimed that, there is a direct causal link between five sets of variables, namely: modernising institutions, modern values, modern behaviour, modern society and economic development ( Fagerlind *et al*, 1983).

The theory of human capital assumes that skill acquisition and the process of human and physical capital accumulation are essentially homogeneous. Human capital theory suggests that education is an investment that, at some point in the future, provides returns to industrials in the form of jobs and incomes. Human capital theory states that employment opportunities create the incentives for individuals to acquire the human capital necessary to obtain employment, since individuals are fundamentally concerned with the acquisition of wealth and status.

Conflict theories of the relationship between education and the economy, Weberian based market theories of the reproduction, and neo-Marxist theories particularly

Bowles and Gintis analysis of correspondence, have emphasised the continuities and discontinuities between the demands of capitalist production and education. What conflict approaches have in common is a challenge to technological-functionalist and human capital theorist's assumptions. Conflict theories argue that the links between education and the economy are not essentially rational, meritocratic and hence progressive. Although, these radical sociologists, in many ways differ, in their explanation of how the relation between education and the economy developed historically and the nature of the relationship today. However, conflict theories assumptions are useful in criticising the optimistic assumptions of technological-functionalists and human capital theorists, and introducing the key concepts of power and conflict into the analysis of the pivotal education-economy relationships. In doing so they tend to argue that the links between education and the economy are all about power and not about production. Nevertheless, it is highly unlikely that education and training can have no connection to economic productivity, if they did not then employers in countries like Germany and Japan, who have placed so much store and invested highly on skills as the motor of economic productivity would have to be considered mistaken in their view.

However, both series of theories-the functional-technical theories and conflict theories, tend to be formulated around static relationships when the relationship between education and economy is more dynamic. According to Fuller and Robinson (1992) none of the theories in the conflict tradition can easily interpret the bulk of the empirical research, which finds that the effects of education on the economy are

neither absolute nor invariant, but vary considerably in nature across levels of education, across countries, and across time periods. So as Robinson and Browne (1994) and Ashton and Green (1996) have argued rather than considering the contribution of education to economic growth, it seems better to consider those conditions which lead education to contribute to economic growth. For these commentators, the links between education and the economy are always contingent and subject to constant readjustment. In part this is because there is a political struggle over the selection and allocation of skilled individuals in the way the radical sociologists suggest and in part because the demand for skills is constantly changing. (Ashton and Sung, 1997). In this respect, the work of Ashton and his associates is of particular interest because it seeks to integrate the insights radical sociologists have on power and conflict with the idea that education and skill development are central to economic development. Contingency theory in the work of Ashton and his colleagues elaborates a theory of skill formation systems that defines the institutional conditions necessary for achieving higher levels of skill formation such as: a) fraction of the ruling class, b) the production of a high level of competencies by schools, c) the commitment of groups of leading employer to the goals of high level skill formation, d) the creation some form of regulation and accountability in the process of skill formation at the workplace, e) the development commitment amongst workers and f) the reorganisation of closer links between on-the-job training and off-the-job training

Ashton and his colleagues in taking into account the present situation of the economy have made considerable advances on early theorists of the education-economy

relationship. A further step has been taken by Brown and Scase (1994) which links the changing nature of skills demanded in a post-Fordist economy to questions of character or personality. They claim that a post-Fordist economy requires leadership, teamwork and a willingness to be innovative right through the corporation to the shopfloor.

Rubinson *et al* (1994) in reviewing research in this area suggest it reveals a familiar problem in social research: theories that present clear though very different images of educational and economy; and empirical evidence that blurs the lines separating these theories. To make sense of this contrast requires some rethinking. Thus the main theme of our concerns is to look at the links between schooling and the economy to test and build on the work of Ashton and Green (1996) and Brown and Scase (1994). However these theories need to be placed in their social and historical context.

In the post second world war period the Fordist system of production dominated. Ford's model of work was based upon the scientific management theory of F.W Taylor. But the Fordist system of work confronted a series of contradictions at the micro and macro economic levels during this period including; international competition, the changing organisation of work, the introduction of new technology, declining profitability, and increasing labour unrest. In socio-economic and political terms, the recent round of economic restructuring involved the transition from a period of post-war growth based on the Fordist regime of accumulation, Keynesian welfare-state intervention and relatively high-wage, unionised, mass production to one

in which more 'flexible' production arrangements are the norm. These developments have been variously theorised in comparative political economy as a shift from Fordism to 'neo-Fordism' (Aglietta 1979; Coriat 1980), from Fordism to neo-Fordism and 'post-Fordism' (Piore and Sabel 1984, Brown and Lauder, 1997), or from Fordism to "flexible accumulation" (Schonberger, 1982; Atkinson, *et al.* 1985; Lash and Urry, 1987; Harvey 1990; Watkins, 1991; Jessop, 1994). These theories are distinguishable in the light of their focusing on macro (Aglietta, 1979; Lipietz, 1982), micro ( Sabel and Piore, 1984; Atkinson, 1985; Zuboff, 1988; Womack, *et al.*, 1990; Kochan *et al.*, 1997; Jones, 1997; Soderquist, 1997; Knauss, 1998 ) and meso (Brown and Lauder, 1992, 1997) levels.

There is debate between different commentators on the structure and limitations of neo and Post-Fordism. In searching to explain the relationship between education and the economy, as Brown & Lauder, (1997) have pointed out, the theories of neo and Post-Fordism are central to an understanding of the process of skill -formation, transition and skill-utilisation. These fundamental changes from Fordist, to neo or post-Fordism raise the question of whether the competing theories of education-economy relationship of the post-war period are themselves the product of the Fordist era. It is argued that the most defensible of these need modification while new theories such as Ashton and colleagues and Brown and Scase (1994) need to be developed if they are to address the key issues concerning the linkages between education and the economy in the 'post-Fordist ' era. In the case of 'post-Fordist ' trajectories workers require increasingly higher levels of preparatory education and



continuous opportunities to learn within the workplace while this wasn't the case in the Fordist system of work. Moreover, a new range of skills has achieved prominence in the discussions over the shift from Fordism to "post-Fordism", these concern the centrality of key or core skills to economic activity. The skills involved here are intimately related to personality and involve teamwork, communication, and problem solving and information technology. It is because on the one hand economies have undergone these major changes while on the other, there has been little recent discussion of the general relationships between education and the economy that this thesis revisits the theories of the late seventies and early eighties in order to investigate the scope for theoretical and empirical advances in this area.

Nevertheless, it is arguable that if appropriate modernised forms of skill formation are to be developed, it requires a partnership between the state, in particular the education system, with private enterprise, workers and managers. The difficulty confronting policy makers and planners is how to form partnerships between these groups so as to integrate the education and training process to the requirements of the new economic realities. The key question which relates to the interface between the education system and industry is, whether the education system is preparing students appropriately for paid work? The rhetoric in relation to 'post-Fordism' is about the empowerment of workers as learners in the cause of functional flexibility. It is important to ask 'what sorts of knowledge and skills are needed in contemporary capitalism and what are the appropriate policies that government, industries and individuals can take? How are the systems of knowing and doing changing and what

responses are appropriate? How much preparation of the workforce should take place in schools or the workplace? How can knowledge be situated in production and service systems so that it is shared and developed rather than divided or narrowly controlled? How can we better transfer students from schools to the labour market? And finally, how do we utilise the workforce's skills in order to achieve greater productivity? And in reaction to key skills, as the European Commission programme (1995) stated, we are in reactive mode, discussing new multi-skilling, polyvalent, key/core qualifications but yet there is no clear plan of how or in what ways the key new skills can be acquired.

## 1.2 The significance of the study

The concern of this study is the relationship between education and economy in the light of the development of the 'post-Fordist' economy. Its significance lies in the fact that we need to understand the best ways of finding links between education and the economy at a time of rapid change. It is important to be able to inform educational planners, school governors, headteachers, and teachers who are dealing with designing and planning to cope with the new conditions of society in improving young peoples' transition from school to the labour market. The problem with these more general theories is that they do not consider what is actually occurring at the interface between the education system and that of industry. We therefore, need to generate empirical studies that look at the relationships between education and work

which attempt to tease out the kind of skills demanded and whether they can and should be taught and assessed within the education system. A key element in such a study concerns the transition from school to work for students given the new industrial and social context in which they find themselves.

### 1.3 Research Goals

The goals of this research are to examine the relationship between skill formation, and skill utilisation in a framework of new forms of work organisation in industrial manufacturing. There are some general questions that we can ask about the relationship between education and industry.

1. What is the relationship between skill formation and economic transition? What kind of relations are emerging between work, education and society? To what extent has education kept pace with the changing forms of organisation and consequent skill demands in industry?
2. How has the organisation of work ( neo-Fordism, and Post-Fordism models) changed over recent decades in industry? Do these different economic trajectories demand different kinds of skills?
3. What kind of key skills are demanded by industry? How much consensus is there amongst stakeholders in schools and industry about the nature of key skills ?

4. What are the functions of key skills in the neo and post-Fordist economy? Are they used differently in neo and post-Fordist organisations? Is key skills organisation specific or they are transferable between various domains? Can key skills be taught, and if so how ?
5. What are the links between industry and education which can enable the changing key skill demands of industry to be communicated?

#### 1.4 Research domain and process

The research questions are of a descriptive, exploratory and explanatory nature. They are designed to clearly draw a picture of what is happening, why it occurred, and how appropriately and deliberately reactions are developed. A case study approach is used to get a better understanding of the relevant education key skills, labour relations, work organisation and skill utilisation issues.

In chapter two, the changing nature of economics from Fordist to 'post-Fordist' alternatives are described. Then based upon the 'macro', 'micro' and 'meso' theories of neo and Post-Fordism a model had been generated. In the model the importance of the role of learning and skill formation under a 'post-Fordist' system of work is illustrated. It is arguing that fundamentally we can characterise the change from Fordist economies in terms of two ideal types neo-Fordism and post-Fordism. Based on the criteria of these models it is expected that within this framework to make

judgements about whether a particular organisation works under neo or post-Fordist systems of production.

Chapter three examines the degree and nature of the relationship between the school system and economic system in the context of neo and post-Fordist ideal types. Here theories of relationship between education and the economy, orthodox technological-functional theories, human capital theories, radical or conflict theories, contingency theories and modified Weberian theory are analysed to find to what extent they are applicable to the neo and Post-Fordism relationship between education and the economy. The background of each theory in terms of its principals and critiques are considered. Thus, the problems, issues and difference between learning, training and education in Fordist and 'post-Fordist' economies are summarised. We conclude that key skills such as teamwork, communication and problem solving will be fundamental in neo and post-Fordist system of work. But that they will have different roles in the two types of organisation and hence different implications for education.

Chapter four addresses the economic and social framework and significance of key skills for the economy. Three issues in relation to the key skill debate are discussed In chapter four. First, the so-called irrationality of key skills in terms of its role in surveillance and control of the workforce under the neo and post-Fordist system of production is considered. Second, the question of whether key skills are organisation and occupation specific is discussed. The answer to this issue makes clear whether key skills can be transferred from one domain to an other and whether they can be

taught in schools or further education institutions. The third related issue deals with the teachability of key skills and the methodology involved in teaching and learning of key skills.

Chapter five discusses the methodology of the research. A case study approach has been adopted to collect and analyse data. It focuses on interviews with the managers of the Rover Group, apprentices, ex-apprentices, Rover Group trainers, teachers, head teachers, pupils, and LEA representatives in Swindon. Data were also collected through observation at Swindon Business Education Partnership Initiative meetings, and the analyses of the company's documents. Plant observation was also conducted.

The Rover Body and Pressing Plant in Swindon was chosen for certain reasons. First of all, the car industry is seen in all advanced countries as a key sector in manufacturing. Secondly, Rover Group is Britain's largest motor manufacturer. It produces over half a million vehicles a year (1998) and exports its products to about 100 countries world-wide. Rover produce four distinct vehicle ranges- Land Rover, the Rover brand, Mini, and MGF. Rover is a major employer with 39,000 people working for the company in the UK and internationally. Rover in 1994 introduced a "New Deal", which claimed to change the philosophy and culture of production. Thus they believe in flexibility between jobs, and a single status for all associates, plus learning and career development for all. Rover has started a partnership with schools and has established an education partnership centre. The company advertises itself as an example of a post-Fordist organisation. Arguably it is an ideal company to study

because it should provide systems of best practices, in relation to the education-economy partnership and training from which others can learn.

Swindon is synonymous with both success and change. In a period of less than fifty years since 1951 the urban area has developed from a primary railway town of 76,000 residents to a major regional centre and unitary borough in which over 100,000 people now work and an estimated 170,000 people live. Swindon has the highest number of companies with over 100 employees for a town of its size in the country and its mixed economy means that there are a large number of highly qualified people across all vocational areas working in Swindon. Most schools and the colleges in Swindon have a close and mutually beneficial working relationship with the local business community (Swindon Education Business Partnership Proposal, 1997). So in theory the Swindon context for this study of the education-economy partnership suggests ongoing best practice.

Chapter six starts with the question of whether the Rover Group is a post-Fordist organisation, according to our ideal types of Fordist, neo and post-Fordist organisations. The conclusion achieved is that Rover is neither a neo Fordist nor post-Fordist organisation but certain key aspects approximate to the post-Fordist model. This raises questions about their training and use of key skills.

In chapter seven we examine the process of selection and recruitment in the Swindon Body and Pressing plant. The results show that in the process of selection and recruitment Rover considered qualifications, attitude tests and interviews and

experience on key skills. Chapter eight has examined four sets of claims regarding the process of skills development particularly key skills in Rover namely, the nature of skill development and training, the role of key skills, the social domain aspect of key skills and issue related to the teaching of key skills. The conclusion was made that there was clearly a degree of indeterminacy about the nature, significance and role of key skills, which has affected the process of learning and utilisation of key skills.

Chapter nine clarifies the relationship between education and the economy in the Swindon area. Here we ask questions such as: is it the case that GCSE's and A-levels produce the teaching of key skills for industry? Do league tables, ironically, shore up the academic-vocational divide and hence perpetuate the long standing complaint (Weiner, 1981) that education is not sympathetic to industry's needs? Do schools in the Swindon area teach what is needed for a leading edge company like Rover? Or is it an industry which still has not done enough to change the organisation of work to utilise students skills and knowledge? Are employers not sure about the kind of skills they want?

The conclusion drawn is that with respect to key skills the links between education and industry are in tension, partly because schools are wary about teaching new skills when the demand for academic achievement though league tables is so high. And, partly because even in a leading edge company like Rover the role and value of key skills in production remains unclear.



In the case of schools, it may be 'rational' that they concentrate on basic academic achievement, given that the nature of the demands for work are so varied as between neo and post-Fordist organisations. In the case of Rover there have been many changes in ownership and control in recent years which may have caused an uncertain organisational culture. Arguably it is only in a stable culture that key skills can be embedded successfully. Such conditions have not obtained at Rover. Arguably, in this respect the experience of Rover may reflect those of British industry in general.

## **2 The Change from Fordist to 'Post-Fordist' Alternatives**

### **2.1 Introduction**

One of the fundamental debates regarding the nature of contemporary economic, social and educational change concerns the question of the move from Fordism to "post-Fordism". Over the past thirty years it is clear that in the advanced economies there has been a fundamental shift from the production techniques of Fordism, which generated the post-war economic boom, to a range of alternative forms of production variously described under the heading of neo and post- Fordism. The implications of these are far ranging and no where more so than in education and training. In order to understand the significance of these changes, especially for education and training we need to characterise Fordism, explain the forces that brought about its demise and then consider the implications for education and training of the various alternatives to Fordism.

In this chapter I discuss the nature of Fordist production and the factors leading to its demise. This is followed by a discussion of the various alternatives to Fordism which have usually been characterised as two possible alternatives: neo and post Fordism. These alternatives represent two politically structured responses to the crisis of Fordism which represents two different ideal typical approaches to the use of skill, and hence, of skill formation. Consequently, on the basis of the analysis of these two ideal types, a set of research questions can be developed which enables the testing of

the degree to which a company like Rover conforms to either neo or post Fordist forms of manufacturing organisation.

## 2.2 The Fordist organisation of work and societal relations

Fordist production was popularised in the USA by Henry Ford himself and was already part of the social scientific and popular consciousness in North America and Europe in the 1920s. Fordism is generally considered as a set of industrial and broader societal practices associated with the workplace innovations pioneered by Henry Ford in Detroit, Michigan in the second decade of the Twentieth century. The workplace innovations introduced by him involved a reorganisation of the industrial workplace to facilitate the mass production of various commodities and which in turn led to creation of the social conditions that would allow the mass consumption of these commodities.

Henry Ford is regarded as the first person to apply techniques of scientific management (associated with the work of F.W.Taylor) to industrial production. In order to facilitate the mass production of automobiles Ford introduced a number of scientific management principals based on highly division of labour.

Womack, *et al.*, (1990) have argued that in Fordism systems of production, work is designed and based on the division of labour in its ultimate extreme.

"Ford divided labour not only in the factory, but also in the engineering shop. Some industrial engineers specialised in assembly operation, others in the operation of the dedicated machines making individual parts. Some manufacturing engineers specialised in the

design of assembly hardware; others designed the specific machines for each special part. Some product engineers specialised in engines, others in bodies, and still others in suspensions or electrical systems. These original 'knowledge workers' were individuals who manipulated ideas and information but rarely touched an actual car or even entered the factory. The shopfloor worker had no clear path, except perhaps [to?] top foreman. But the newly emerging professional engineers has a direct climb up the career ladder. [Engineers would advance within their profession-from young engineer-trainee to senior engineer, who, by now possessing the entire body of knowledge of the profession, was in charge of co-ordinating engineers at lower levels (pp.32-33)."

Ford believed that a new kind of society could be built by regulating the work day and the wages so that there was enough time and money to consume. Fordism spread after World War II as it became entrenched in Europe and Japan through the Marshall Plan (Harvey, 1990). The dehumanising effect of this change from specialised industrial occupations to routine, repetitive job tasks meant that Ford was forced to increase the wages at his factories in order to encourage workers to stay. While this move has been interpreted as a sign of his concern for the working class it had a more pragmatic side to it. These techniques of organisational and social control utilised by Ford were analysed in the 1930's by an Italian Marxist named Antonio Gramsci. For Gramsci, the so-called high wages were at best a necessary form of persuasion for workers called upon to endure an especially monotonous, degrading, and life draining work process (Gramsci, 1971). Given this, it is more difficult to accept the argument that Fordism was a mutually beneficial arrangement worked out between employers and workers.

The discussion above indicates that even Ford himself thought of his new productive technique as having far broader implications for society than just as a form of

manufacturing organisation. Hence the term "Fordism" has come to have several different meanings which have become popular currency in describing the characteristics of industrial organisation and social relations from the end of the second world war up to the mid 1970's. There are at least five different meanings ascribed to the term Fordism. These are (a) the production process, (b) the regime of accumulation, (c) mode of regulation (d) a mode of socialisation and (e) a social formation characterised by the contingent correspondence of all four of the preceding features (Jessop, 1994). Under this regime of capital accumulation Taylorist production techniques were combined with institutional stabilisation of workers welfare and wages in order to ensure a market for the mass consumption of industrial goods. This was seen as a compromise, mediated by the state, between the opposing interests of the capitalist and working classes. It is clear that these five meanings, beginning with what is a narrow view of Fordism as just a production technique are broadened to encompass a range of social and political factors which it has been theorised are related to the organisation of production. This movement from the narrow organisational concern to its impact on societal level factors can be seen as a shift in focus from the micro to the macro. At the macro level it has been the French Regulationist theorists who have been prominent in linking the productive process to broader social and political processes. In order to articulate and explain the systemic coherence of individual phases of capitalist development, Regulation theory draws on a number of key concepts which identify the core mechanisms at work. The two key concepts of their theorising are:

### 1. The Regime of Accumulation

### 2. The Mode of Regulation

The Regime of Accumulation refers to a set of regularities at the level of the whole economy (macroeconomics), enabling a more or less coherent process of capital accumulation (Nielsen, 1991; Jessop, 1994). Also it is used in the allocation of the net product between consumption and accumulation achieved through mass production, full employment, and full capacity (Lipietz, 1992; Harvey, 1990). It includes norms pertaining to the organisation of production and work (the labour process), relationships and principles of income sharing between wages, profits and taxes, norms of consumption and patterns of demand in the marketplace, and other aspects of the macro-economy.

The Mode of Regulation refers to the institutional whole (laws, agreements, etc.) and the complex of cultural habits and norms which secures capitalist reproduction. It consists of a set of 'formal or informal' rules that codify the main social relationships and regulating networks that insure the unity of the process (Harvey, 1990; Nielsen, 1991), i.e., minimum wages, social security, and credit money (Lipietz, 1992).

Aglietta (1979) takes this analysis further to examine the political implications of this mode of production. For him this intensive regime of accumulation was characterised by rapid increases in the rate of surplus-value and a social democratic mode of regulation, in which consensus was constructed by the state between capital and labour. Part of this consensus is achieved through the creation of the welfare state to

help maintain the position of the unemployed, the aged, the handicapped, etc., as consumers. It restructured the social norms of the family as a consumption unit and redefined the role of women whose primary purpose in life was to manage the consumption needs for the family. This was accomplished, in part, through anti-feminist themes in the media and other forms of cultural management (Adkin, 1985).

### 2.3 The Crisis of Fordism: What factors have caused the change from Fordism to various possible 'post-Fordist' alternatives?

The Fordist model of accumulation generated several contradictions. These contradictions have roots in a number of factors which intertwined in various aspects: a) shifts in the nature of production and the introduction of new technology to maintain competitiveness coupled to changes in the nature of market demand; b) declining value addedness, and c) increasing labour unrest and international factors associated with the decline in American competitiveness were the principle factors which caused the demise of Fordism.

#### 2.3.1 The changing nature of production

In respect to changes in the nature of production and market demand Ford, (1989) lists the following key shifts from:

Quantity to quality

Production to productivity

Consumption to conservation

Stability to Incremental Improvement

New technology enabled the integration of production, distribution, and marketing to an extent previously unattainable. The success of Japanese producers in world markets, with their use of production methods such as 'just-in-time', 'total quality control', 'flexible work patterns' and extensive use of sub-contractors provided an example of a new form of manufacturing 'best practice' to which other firms strive (Phillimore.1991). Jessop (1994) argues that given the growing competitive pressures from newly industrialised countries in low cost, low technology production and, indeed, in simple high tech goods and services, the advanced capitalist economies had to move up the technological hierarchy and specialise in the new core technologies if they were to maintain employment and growth. Piore and Sable (1984) and Bennis (1972) suggested that advanced Western economies were confronted with the choice between two alternatives:

- a) Maintaining the rigid hierarchical division of labour, and the low-skill and low-trust relationships characteristic of Fordism, or
- b) shift to a system based on adaptable machinery, adaptable workers, flatter hierarchies, and the breakdown of the division between mental and manual labour and learning.



### 2.3.2 The changing nature of market demand

As the market for standardised, mass-production goods became saturated in the 1960s, two developments opened the way to alternatives to Fordism. First, increased competition (both from other advanced countries and from the newly industrialised countries) forced large firms to cut costs (especially labour and fixed capital costs). Second, consumer 'tastes' became more diverse as 'basic' needs were increasingly satisfied, and the resulting market differentiation enabled many 'First world' producers to profitably enter 'market niches' for low-volume, high quality goods for which mass production was unsuited and for which high-wage, high-skill labour was an asset rather than a cost.

### 2.3.3 Declining rates of surplus value and labour unrest

The decline in profits was an important issue in reshaping the system of production. Corporations began to realise a profit squeeze, as incremental additions to capital became increasingly costly, particularly as technological advances rendered equipment obsolete before the end of its economic life. Rates of surplus value began to decline (Aglietta, 1979). Increasing labour unrest was one of the consequences of Fordism. Piore and Sabel (1984) argued that in the late of 1960s and early 1970s, the mechanisation of work intensified the pace and alienation of work which increased labour unrest. Combined with mass congregations of workers at the point of production, workers began to sabotage the production process via unexplained delays and absenteeism (Carnoy and Levin 1985). The initial rise in surplus value, in the

1950s, at the expense of the worker further intensified the class struggle between workers and capitalist management (Aglietta, 1979; Lipietz, 1992). In addition, the state was criticised for not providing an adequate social wage. Furthermore, mass consumption and bureaucratic services were criticised for not meeting individual needs (Harvey, 1990; Lipietz, 1992). Wheeling (1996) point out that in USA these contradictions ultimately led, along with other factors such as the Vietnam war, to the undermining of the US world position and to the crisis of Fordism.

#### 2.3.4 International factors and the decline in competitiveness of the U.S.A

Beginning in 1967 the productivity of Europe and Japan closed in on US productivity (Lipietz, 1992). From that time on, the US trade balance was in deficit, and by 1971 dollars could not be converted into gold (Lipietz, 1992). The decline in the growth of productivity and profitability after 1966 led to increased inflation and undermined the role of the dollar as a stable international currency. During the period of 1965 to 1973, the contradictions of Fordism became more and more apparent. Long-term labour contracts and state commitments along with large capital investment restricted capital's ability to be flexible in the wake of this crisis. By 1973, with Nixon's wage-price freeze, along with increased oil prices and the Arab oil embargo, a recession ensued. The benefits of Fordism (i.e., a higher standard of living for populations in industrialised nations and a stable environment for corporate profits) were severely threatened (Harvey, 1990). In fact, these factors have changed the ability of the state to control and direct the national economy. The welfare state, although necessary for

the success of the regime of accumulation, also contributed to the profit squeeze through corporate taxation necessary to maintain social wages. The slowing down of profitability and investment along with declining employment due to increased mechanisation resulted on increasing costs of the welfare state (Lipietz, 1992).

#### 2.4 "Post-Fordist" alternative theories

The transformations and issues raised by technological changes, wider social and cultural shifts and intermediate phenomena, including changes in the structure of organisations and patterns of employment which are linked to the economy and society, created the demise of Fordism. To answer the challenges to Fordism it was inevitable that new systems of production had to be developed. But what are the alternatives to Fordism and how have they emerged?

Part of the problem in seeking to answer these questions concerns the many different foci that theorists have taken in seeking to explain and describe new modes of industrial and societal organisation. Just as there were a range of micro and macro theories regarding Fordism so the same is true of post-Fordist alternatives.

In order to develop criteria for judging the degree to which a leading edge company like Rover may have developed into a post-Fordist company it is necessarily first to distinguish the broad sense in which terms like neo and post-Fordism are used. Therefore we need to examine some of the more important contributions to this debate about alternatives to Fordism in order to establish the more detailed criteria by which the neo and post-Fordist industrial relations can be identified. It should be

emphasised that although the characterisation will initially be in terms of what may be considered as ideal types, "neo and post-Fordism" these will be refined in the subsequent discussion. In a field as complex as this ideal types may help to identify essential differences within the two alternatives to Fordism, but clearly in the real world matters are likely to be more complex.

To start the discussion we may distinguish between the alternative theories in terms of their emphasis on macro, micro and meso (middle) levels. At the macro level the main theoretical contribution has come from the Regulationist theorists (Aglietta, 1976; Lipietz, 1982) and the flexible specialisation theory of Sabel and Piore (1984). At the micro level of the organisation the discussion has largely been in terms of lean production (Womack, *et al*, 1990), the flexible firm (Atkinson, 1985), and a cybernation shift (Jones, 1997). At the meso level linking different kinds of post-Fordist alternatives to education is the work of Brown and Lauder, (1992, 1997). The latter have developed a theory which explicitly explains the possibility of future alternatives for the economy, while following each alternative is a matter of political struggle. However as we shall see there are problems or more precisely gaps, in their characterisation of neo and Post-Fordism.

As might be expected Regulationist theories as macro description of neo and post Fordism are focused on the broad social and political implications for the management of capitalism based on a new form of production. According to this school the motor of transition is located in the sphere of production (Aglietta, 1976; Coriat, 1980;

Lipietz, 1982; Boyer, 1990; Watkins, 1994). Aglietta, Coriat and Boyer see the new mode of regulation as very much the domination of managerial ideology which seeks new ways of imposing capitalist hegemony through such strategies as work teams, corporate culture and quality control, of infiltrating all sections of society, including education, in order to gain a tighter control over the workforce (Watkins, 1994). The basic weakness of Regulation theory is, according to Hirst and Zelig (1991), its economic determinism, which is reflected in the absence of a thorough analysis of the state.

The second group of theories is focused on the micro level or the firm. These theories have been called, variously, flexible specialisation, lean production, modular mass production, flexible firms, and humanistic models. According to the 'M.I.T researchers, patterns of consumption are the driving force of the transition (Sabel and Piore, 1984; Katz and Sabel, 1985; Kochan, *et al*, 1997). That is, consumption has shifted from mass produced commodities to specialised and diverse goods, and this promotes a shift from mass production to new flexible techniques. This flexibility initially entails flexible technology which can be quickly and easily adjusted to produce a diverse range of products. Most importantly it also entails the creation of a flexible workforce where individual employees are required to perform a diverse range of tasks, and where the quantity of labour time is quickly adjustable to demand.

MIT's International Motor Vehicle Project has identified the Japanese Model of "lean production" as the key factor in change at the micro level. In their book, " *The*

*Machine That Changed the World*", Womack, *et al*, (1990) assert that an essential element of the lean production system is that it empowers and liberates workers. Lean production (pioneered by Toyota) is "lean" because it is a system which can produce faster with less effort and fewer errors.

“ . Because it uses less of everything compared with mass production- half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product in half the time. Also, it requires keeping far less than half the needed inventory on site, results in many few defects, and produces a greater and ever growing variety of products (p.13).”

Womack, *et al* suggest that there are some basic differences in design methods employed by Fordist mass and 'post-Fordist' lean producers. The key techniques are: (i) teamwork, (ii) continuous improvement through teamwork, and (iii) just- in- time inventories.

There are several points to make about the application of lean production techniques in different national economies. The first is that elements of the Japanese model of lean production have been adapted in different ways rather than simply adopted wholesale (Elgar and Smith, 1994). Moreover, the form that adaptation has taken has had quite different consequences for the labour market, for worker autonomy and discretion and for skill formation. For example, Atkinson's analysis of the 'flexible firm' (1985) describes what is, perhaps, the dominant trend in the organisation of labour within firms in Britain. According to this model firms consist of a " core group" of workers surrounded by peripheral groups of workers who may or may not be employees. Managers seek 'numerical flexibility' through increased part-time

employment and temporary work, overtime and flexible working time. As demand rises so the number of peripheral workers recruited rises, as it falls so the firm's costs are reduced by firing the peripheral workers. Firms also employ functional flexibility by which is meant that they retain a core workforce of multi-skilled workers who carry out the firms' essential tasks. In terms of autonomy, periphery workers have little and equally they are likely to be semi or unskilled. Even when this is not the case periphery workers are unlikely to receive more than just-in-time training (Lauder, 1999) since they are by definition, expendable. However, not all firms or indeed economies operate according to this broadly ideal typical model. For example, the key human resource feature of Japanese firms is that they employ a workforce for life. Here the bargain is that in return for a commitment to a company, which includes the willingness to be re-skilled, workers are employed for life (Dore, 1986). There are, then, different ways in which elements of lean production can be used. In a nutshell while Japanese firms use just in time techniques for their inventories, in Britain they have been extended to a significant element of the workforce.

Similarly, Knauss (1998) has argued that America's competitive edge in productivity has not been created by the upgrading of skills but rather by adapting some elements of Japanese lean production to Fordist techniques. She has called this production system "Modular Mass Production", since its fundamental logic is the organisation of tasks into separate bundles which are self-contained, as in Fordism, yet internally integrated by lean production techniques.

In contrast, Volvo's Uddevalla plant in Sweden provides a model which does utilise greater autonomy and skill. Volvo's democratic Uddevalla system has its roots in socio-technical theory and has very high human resource selection, training and development demands and costs for its assembly team members. Volvo work organisation is based on job enrichment, production-group organisation for car assembly, built around teams of ten multi-skilled workers, with a partially automated materials, team autonomy, a larger number of work operations, extended competence, and functional learning. Here functional learning principles are emphasised in opposition to traditional additive learning. With functional learning, the objective is learning to complete a whole process of car assembly. This process of learning reveals the important potential for work enrichment that functional learning implies (Soderquist, 1997). This form of learning is reinforced by a supportive, democratic environment to make workers innovative as well as productive. The purposes of involving workers in decision-making is that it enables them not only to feel commitment to the company by being empowered by it but also to express the detailed knowledge of the production process to enhance innovation. The question is whether this new worker-friendly system can compete within Anglo-American variants (Rehder, 1992). Table 2.1 summarises research findings comparing volume producing Japanese North American transplants with US plants in North America and European plants.



Country	Japanese Transplants in North America	U.S. Plants in North America	European Plants
Productivity (hours/veh.)	21.2	25.1	36.2
Quality (Assembly defects/100 veh.)	65.0	82.3	97.0
Inventories (days for 8 sample parts)	1.6	2.9	2.0
Size of Repair Area (as % of assembly space)	4.9	12.9	14.4
Absenteeism	4.8	11.7	12.1
Training of New Production Workers (hours)	370.0	46.4	173.3
% of Work force in teams	71.3	17.3	.6
Number of Job Classifications	8.7	67.1	14.8
Source: MIT IMVP World Assembly Plant Survey 1989 and J.D. Power Initial Quality Survey, 1989. (quoted from; Rehder.1992)			

**Table 2-1:** Comparative Japanese and American Plant Performance in North America

The implication of these results is that where human judgement, autonomy and learning are utilised the performance of manufacturers is probably superior to that under systems where it is not. This view is supported by qualitative research such as that of Zuboff (1988) who has shown that where computers were employed in firms to enhance human creativity productivity was higher than where it was used to as a form of surveillance and control over the workforce.

If we stand back from these specific studies it becomes clear that two quite different pictures of what a 'post-Fordist' alternative might entail have emerged. In the former

'negative' case the post-Fordist alternative is seen as having disproportionate benefits for capital, by dividing labour and intensifying the labour process more thoroughly than mass production ever did. It is also doubted that small, innovative firms such as those highlighted by studies of the "Third Italy" will necessarily be the dominant features of an era of flexible production. Much more typical, it is argued, are the dependent sub-contractors, or home workers- sweatshop labour with poor conditions and low job security. In addition, the majority global tastes to which post-Fordism caters are likely to be luxury tastes, ignoring the needs of majority. (Phillimore, 1991).

Regulation theory is equally sceptical of an optimistic post-Fordist future seeing the dominant managerial ideas of Total Quality Management, team-work, corporate culture and education as enabling tighter control over the workforce (Watkins, 1994). This is supported by studies in the Britain. Turnbull (1988) has argued that many British manufactures are emulating the production and employment policies of their Japanese rivals. But there are limits to such a process, especially in the sphere of labour-management relations and the control of work:

"Just -In-Time (JIT) is a highly developed form of work intensification which belies any notion of job enrichment through teamworking, flexibility and job rotation claimed by many proponents of JIT (in fact, job rotation, team-working, flexibility and the like are very tools of work intensification under the JIT system), (Turnbull, 1988:8)."

And similarly:

"In the traditional batch production environment, the workers are like servers in a conventional restaurant; in the JIT environment they are like servers in a fast food restaurant (Saipe, *et al*, 1984, quoted from Turnbull, 1988)"

Garrahan. *et al*'s (1992) case study of the Nissan automobile assembly plant in Sunderland, which opened in 1986, contributes to the literature on economic globalisation as well as to the debate about "lean production" and teamwork in the auto industry. The authors criticise the much-vaunted Japanese system of work organisation, highlighting the severe constraints it imposes on union power and influence as well as the ways in which the team system secures managerial control over labour. As evidence that the system disempowers workers, they present critical comments drawn from interviews outside the plant with nineteen workers, although they do not explain how these workers were selected. Consequently, they believe Nissan's 'post-Fordist way is a mechanism of social control arguing that many Fordist ends are still being achieved but by means different from those typical of the Fordist era: control via quality, exploitation via flexibility and surveillance via teamworking. Social control is being achieved through an internal organisation, which replace employer-employee conflict with competition and inter group rivalry<sup>i</sup>.

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<sup>i</sup> In fact, the problem of control in the literature goes back to the long debate about the upskilling and deskilling of the workplace and the nature of new systems of management. There is debate about the whether technological change leads to higher or lower skill demands (Kerr. *et al.*, 1960; Blauner, 1964; Bell, 1973; Braverman, 1974; Marglin 1974; Zuboff 1988; Cappelli, 1993; Jones, 1997).

Another study by Graham, (1994) who worked as a hidden participant/observer at Subaru-Isuzu Automotive in Indiana also concluded that the new organisation of work increased management control. In particular, he argued that the concept of teamworking in a decentralised structure hides the capitalist-worker relationship through the ideology of egalitarianism (see table 2.2). Graham usefully summarises a battery of mechanisms by which management enhances its control over workers as follows:

Work aspects	Mechanisms of control	Effect on the shopfloor
Social aspects	Pre-employment selection process	through a battery of tests and observed exercises
	Orientation and training of new workers	Which focused on: tours of the plant and its rules; the company's history and philosophy; and socialise workers based upon the factory expected behaviour. 71.5 percent of training is concentrated on attitude and behaviour
	The team concept	which control workers in three ways: Self-discipline; peer pressure and team leader and trainers pressure
	A philosophy of Kaizen	Everyone is expected to continually make his/her job more efficient. Striving to work to maximum capacity. Perform time study on each other and to their jobs. In this way management attempts to gain more knowledge of workers and control their tricks in saving time.
	Shaping shopfloor culture	Control informal group through packing them into group working. Creating organisational culture via specialised symbols such as, wearing same uniform, same parking and cafeteria by top managers and shopfloor workers and presence of company president and vice- presidents on the shop floor and company rituals such as, morning exercises, team meetings, department meetings, and company celebrations.
Technical aspects	The computerised assembly line	Recording members faults and the number of team line stooped is a pressure on workers
	Just-in-time production	Keeping parts stocked on the line for only a few hours of work put severe time constraints on the material handlers and workers.

Table 2-2: Aspects of works and mechanisms of management control (Graham, 1994:132-141)

In contrast to this pessimistic view there is also an optimistic view. According to this approach it is argued that the transition from Fordism to post-Fordism makes progress towards employee empowerment and control over work. The positive picture also sees 'post-Fordism' as challenging mass production, by providing opportunities for small companies to compete with the large mass production firms, and by allowing large firms to decentralise their operations and incorporate more skill, quality and variety into their organisation of production thus to compete more efficiently against low-wage mass producers in the Third World.

'Post-Fordist' enterprise therefore abandons the oppressive Tayloristic features of Fordism, particularly the infinite division of labour and multi-layered hierarchies. Instead of being told what to do and when and how to do it by a supervisor, accountability for production rates and quality become implanted in the working relationships that operate laterally across teams. The new organisation of work, incorporating team-based work units and efforts to incorporate the ideas of workers, are claimed to have fostered greater worker commitment, and rendered Taylorism obsolete. For supporting teamwork, companies emphasise skills such as problem solving, adaptability, communication, action planning, summative and formative profiling, the development of interpersonal skills and life-long learning (Avis, 1993). The new system of work together with use of information technologies give management and workers more knowledge and resources to control and intensify the work process. Also, these new changes empower workers by increasing their responsibility within a more participatory context. Since Post-Fordism requires more

skills and grants workers more autonomy and responsibility, it strengthens both morale and commitment (Womack, *et al*, 1990; Walton, 1985; Dohse. *et al*, 1985). The consequence of this form of organisation is greater productivity because of a knowledgeable and committed workforce in which conflict is replaced by consensus.

The implication of the above discussion is that there are different 'post-Fordist' alternatives which are encapsulated in the terms neo and post-Fordism: neo-Fordism referring to the 'negative' processes described while post-Fordism refers to the positive. It is significant that many theorists of 'post-Fordist' alternatives, especially after the early optimism that 'post-Fordism' was necessarily linked to greater human freedom, and upskilling (Piore and Sabel, 1982; Brown and Lauder, 1992) have distinguished implicitly or explicitly between two alternatives which represent what may be called an optimistic and a pessimistic scenario of current production trends (e.g., Zuboff, 1988; Lipietz, 1992;; Brown and Lauder, 1997). Brown and Lauder (1997) have summarised the distinction between neo and post-Fordism as follows:

Fordism	Neo-Fordism	Post-Fordism
Protected National Markets	Global competition through: productivity gain, cost-cutting (overheads, wages).  Inward investment attracted by 'market flexibility' (reduce the social cost of labour, trade union power).  Adversarial market orientation: remove impediments to market competition. Create 'enterprise culture'. Privatization of the welfare state.	Global competition through: innovation, quality, value added goods and services.  Inward investment attracted by highly skilled labour force engaged in 'value added' production/services.  Consensus based objectives: corporatist 'industrial policy'. Cooperation between government, employers and trade unions.
Mass production of standardised products/low skill, high wage.	Mass production of standardised products/low skill, low wage 'flexible' production.	Flexible production system/small batch/niche markets; shift to high-wage, high skilled jobs.
Bureaucratic hierarchical organisations.	Learner organisations with emphasis on 'numerical' flexibility.	Learner organisations with emphasis on functional flexibility.
Fragmented and standardised work tasks	Reduced trade union job demarcation.	Flexible specialisation/multi-skilled workers.
Mass standardised (male) employment.	Fragmentation/polarisation of labour force. Professional 'core' and 'flexible' workforce; (i.e. part-time, terms contract, portfolio careers).	Maintain good conditions for all employees. No 'core' workers receive training, frontier benefits, comparable wage, proper representation.
Division between managers and workers/low trust relations/collective bargaining.	Emphasis on 'managers' right to manage. Industrial relations based on low trust relations.	Industrial relations based on high trust, high discretion, and collective participation.
Little 'on the job' training for most workers.	Training 'demand' led/little use of industrial training policies.	Training as an national investment/state acts as strategist trainer.

Table 2-3: Post-Fordist possibilities: alternative models of national development (Brown and Lauder, 1997:175).

Inevitably, the ideal types drawn by Brown and Lauder, while a useful heuristic, are unlikely to be found typically in such stark contrasts in practice. Flynn (1988) in her

study review of 197 case studies argues that one can find cases that support either of the extreme positions or virtually any point in the middle. She concluded that it is difficult to generalise whether the trends reflect either neo or post-Fordist system in terms of the relationship between context and the impact of technical change on skill. Nevertheless, we ought to be able to identify a preponderance of elements of post-Fordist organisation in leading edge firms, if it exists at all and hence the use they make of autonomy, skill and learning in the productive process.

In terms of the latter it is Brown and Lauder (1992, 1997) who have been prominent in developing links between the two types of 'post-Fordist' alternative and education. In this sense their work can be classified as at the meso level because they are concerned with more than narrow organisational issues by considering the implications of these forms of organisation for education and skill formation. However, while their work is of particular interest in identifying the fundamental shift in assumptions about human nature and motivation which underlie the change from Fordism to Post-Fordism they have remained silent on the specific kinds of organisational practice which are involved in learning and skill development and the corresponding education required for post-Fordist work. However, from the above analysis of various theories of neo and post-Fordism one may say there are two related issues that have been highlighted through the literature review that need to be considered:



1. The different ways in which worker autonomy, participation, control, and the mechanisms by which workers are socialised into the firm are dealt with by neo and post-Fordist organisation.
2. The importance the two types of organisation accord learning, skill development and skill utilisation. The two are related because through learning people may be empowered, that is, have greater autonomy. Learning and skill development are in this sense a necessary condition of autonomy. The key to successful learning in this context is an ethos of trust between management and workers, since without it employees are unlikely to be given a degree of autonomy to learn and then to exercise their skills.

There are two reasons why learning is likely to lead to more worker autonomy in the sense of exercising discretion over when and how tasks are to be undertaken. Firstly, learning is part of continuous improvement/innovation and this clearly comes from Japanese lean production. Workers with the appropriate training are much more likely to be able to exercise judgements about how continuous improvement may be accomplished. Secondly, in order not only to accommodate to change but also to innovate workers have to be overtrained in order that they understand about the broader technologies and systems within which they work, rather than simply be "just-in time" trained.

In most of the theories which have been considered here, it is a combination of management based on participation, linked to teamwork and quality circles,

promotion based on skill ladders and company support to climb the ladder,(which distinguishes the breakdown of the division between mental and manual labour which Brown and Lauder (1992) identify as a defining element of post-Fordist organisation) , multi skilling to create functional flexibility, and a relatively lengthy process of skilling by way of induction into the firm. When linked to a job for life policy these are the organisational drivers leading to an emphasis upon learning, skill development, and training. Reflected in these practices must be mutual trust. Central to both parties, in this respect, is the commitment to a job for life. Workers benefit because research shows that casualised workers are likely to receive little or no training (Arulampalam and Booth, 1997, Ashton. *et al* . 1996). Additionally, from the employees' perspective, training demonstrates that the employer values their skills and so is less likely to make them redundant (Heller. *et al*, 1998). From the employers' view point long-term employment makes it more likely that they will recoup the substantial training investment required. Jones and Hendry (1994) defined organisational learning as " hard learning", such as techniques, and " soft learning" as the socio-cultural context in which techniques are applied and developed with the associated socialisation processes. They pointed out that Japanese competitive successes are related to the soft elements of learning. Indeed, as Wong (1996) has stated, the factors which lead to soft aspects of learning in Japanese firms are related to a) the internal labour market, (b) long term company education, (c) graduate training programmes. The reason for raising this point is that the prominence now accorded soft skills raises a further set of issues about whether they are being used as

mechanisms of control, surveillance and screening or whether they are part of an indispensable package which enables greater autonomy, learning and skill development. This is an issue which will be described further in Chapter 3.

## 2.5 Conclusion:

This chapter started by reviewing the literature to find out why and how the organisation of work has changed over recent decades in industry. In doing so, firstly the economic transition to new forms of organisation has been reviewed based upon a macro, micro and meso perspectives on neo and Post-Fordism alternative and from research and case studies of firms in the - USA, UK, and Sweden. Having outlined the key dimensions of the ideal forms of organisation of neo-Fordist and post-Fordism, these models are utilised to identify the key company practices which are likely to engender a commitment to worker autonomy, learning and skill development and conceptualise a general framework for creating research questions related to the features of economic transition (see table 2.4). The general features of the three organisational ideal types under discussion are summarised below:

Fordism	Neo-Fordism	Post-Fordism
<i>Technology</i>		
Machines purpose-built and dedicated; R&D functionally separate and discontinuous Fixed machines and rigid technology Just in case production	General-purpose and adaptable machinery; importance of design Flexible smart machines (CAD, CAM) Just in time production	General-purpose and adaptable machinery; importance of design Flexible smart machines (CAD, CAM) Just in time production
<i>Work System</i>		
Mass production of standardised products Fragmented and standardised work tasks Bureaucratic hierarchical organisations. Narrow span of control Quality control is separated from the manufacturing process Low career path and promotion	Mass production of standardised products Fragmentation/polarisation of labour force. Professional 'core' and flexible workforce (i.e. part-time, terms contract, portfolio careers). Reduced trade union job demarcation. Job enrichment Job enlargement Moderate span of control Less autonomy in group working Quality control is done by managers and workers Low career path and promotion	Flexible production system with flatter organisation Open-ended tasks Closer integration of manual and mental tasks Proportional span of control by team leader Continuous quality control High career path and promotion Flexible specialisation Multi-skilled workers. Teamwork and participation with high autonomy High job rotation
Human Resource development		

Fordism	Neo-Fordism	Post-Fordism
<p>Strict division between mental and manual labour; between managers and workers</p> <p>Low trust relations</p> <p>collective bargaining.</p> <p>Low skills</p> <p>Little 'on the job' training for most workers.</p> <p>Education emphasises on good discipline and respect for authority</p>	<p>Emphasis on 'managers' right to manage.</p> <p>Industrial relations based on low trust relations.</p> <p>Low Skills</p> <p>Training focus on multi-tasks and prepare them for work in an integrated tasks and enlarged jobs alongside the computers.</p>	<p>Industrial relations based on high trust, high discretion, and collective participation.</p> <p>High skills and greater demand for 'knowledgeable' workers.</p> <p>Training focuses on multi-skills</p> <p>Emphasis on key and transferable skills such as IT, communication, problem solving, and teamwork.</p> <p>Utilising key skills for added value, and collective problem solving</p> <p>Emphasis on on-the job and off-the job training.</p>

Fordism	Neo-Fordism	Post-Fordism
<p>High wage</p> <p>Recruitment and socialisation of workers through qualifications, attitude and interview.</p> <p>Depersolised process of recruitment</p> <p>Screening potential young people.</p> <p>More control over workers through close supervisor and manager pressure</p> <p>Motivation and Reward by higher wage</p> <p>less worker participation</p>	<p>Low wage</p> <p>Recruitment and socialisation of workers through qualifications, attitude and interview.</p> <p>Screening potential young people.</p> <p>More control over workers through using more technology, and groupwork, peer group pressure</p> <p>Motivation and Reward by higher wage and integrated tasks</p> <p>Less worker participation</p>	<p>Maintain good conditions for all employees. No 'core' workers receive training, frontier benefits, comparable wage, proper representation.</p> <p>high-wage</p> <p>Recruitment through emphasising on key skills, attitude, technical knowledge, creativity, and charismatic personality</p> <p>Screening potential young people.</p> <p>Motivation and Reward through chance going to higher degree</p> <p>Good paying to apprentices</p> <p>Better reward for those have better performance at college, training school and shopfloor.</p> <p>Higher participation through introducing team group and team meetings;</p> <p>The maximum devolution of authority and accountability to employee;</p> <p>Team is responsible for quality, and company productivity.</p>

Fordism	Neo-Fordism	Post-Fordism
Shaping shopfloor culture through makes them to respect to manager, individual performance, separating shopfloor environment from of manager (cafe, parking, common room, and celebration), wearing different cloth and uniformed .	Shaping shopfloor worker culture through schools and curriculum, respect to managers and company goals  Creating organisation culture via specialised symbols such as, wearing same uniform, same parking and cafeteria by top managers, apprentices and shopfloor workers.	Shaping shopfloor culture and control informal group through packing them into group working.  Creating organisation culture via specialised symbols such as, wearing same uniform, same parking and cafeteria by top managers, apprentices and shopfloor workers and company rituals such as, team meetings, department meetings, and company celebrations.

**Table 2-1:** Ideal model of Fordist, neo and post-Fordist Organisation

For the purposes of this thesis the major interest is in the right hand column. The key question is to what extent does a leading edge company like Rover conform to the organisational practices we have identified as being valuable to the development of learning? However, before look at this question empirically it is necessarily to examine the theories of the links between education and the economy and the nature and purposes of that new set of skills, soft skills which appear to be so important to 'post-Fordist' organisations.

### **3 Skill Formation System and the Economic System**

#### **3.1 Introduction**

This chapter will examine the relationship between skill formation and the economic system in the context of neo and post-Fordist theories of economic change. In either regime of work the links between skill formation and the economy has been a matter of debate amongst stakeholders, educational planners, government, and commentators. During the Fordist and 'post-Fordist' organisation of work two related questions have been prominent. The first is, what are the socio-economic functions of education and training for industry and society as a whole? For example, is education fundamentally a mechanism of social class control as some neo-Marxist critics have argued (Bowles and Gintis, 1976) or is the current emphasis on skills and skills upgrading integral to competitiveness? The second question follows directly from this, to what extent does industry need learning, skills, and knowledge to be effective and how do they utilise these skills in practice?

Clearly, the answers to these questions will depend on which form of economic development is taken, neo or post-Fordist. It could be argued that neo-Fordism would require far less skilled workers than post-Fordism since the competitiveness of the former would depend on casualised, often-cheap labour -what was described in the previous chapter as numerical flexibility. In turn this may require forms of socialisation and discipline which would not be necessary if post-Fordist forms of work predominated. In the latter case competitiveness would depend much more on



the education and skills of the workforce. The problem for education is that in the real world it is likely that most economies may be more mixed in the routes they choose to take, although we might expect a greater emphasis on one of these forms of economic development in various national economies.<sup>i</sup> This being the case it is likely that education systems in a 'post-Fordist' world will face dilemmas and trade-offs in the attempt to match the supply of skill to the demand.

Despite the varieties of economic possibilities that educational systems now have to cater for, it is the case that all advanced economies irrespective of the predominant paths they take are confronted with some common problems. In a 'post-Fordist' world it is not enough for students to leave school without any skills/abilities. On a Fordist production line it has been estimated that workers exercised more skill driving to work than on the production line, while in the post-Fordist production line all workers need basic numeracy, literacy and probably some facility with IT skills. At the same time most advanced economies have expanded the range of professional and managerial jobs and this has meant the corresponding expansion of higher education. However, within these broad parameters there are clearly questions that need to be raised about the precise linkages between education and the economy and especially the notion of skills, which is now so central to all discussions of economic development, which cannot be taken at face value.

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<sup>i</sup> For example, it has been argued that Germany conforms most closely to the Post-Fordist model (Green, 1999) while the Anglo-saxon economies of Britain and America conform more closely to neo-Fordist forms of development (Brown & Lauder, 1997). These national variations are due to political struggles as well as deep cultural expectations and norms. (Brown, 1999; Green, 1999 and Lauder, 1999).

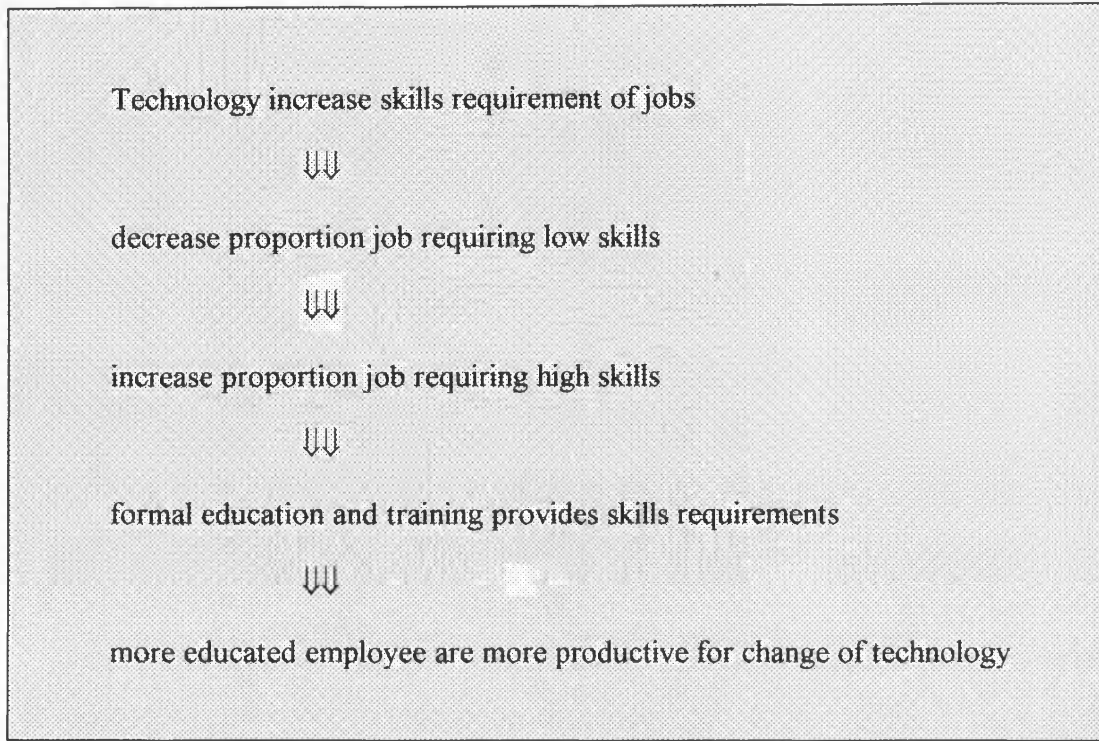
In order to address this issue we need to examine the theories that have been used to explain the linkages between education and the economy. It is argued that the leading, often competing theories are themselves the product of the Fordist era and the most defensible of these need modification if they are to address the key issues concerning the linkages between education and the economy in the 'post-Fordist' era. In this sense this chapter should be seen as an attempt to fill out the broad picture of the links between education and the economy suggested by Brown and Lauder (1997). In order to do so a critical analysis of the key theories linking education to the economy will be undertaken. These theories are:

- i. Orthodox Technological-Functionalist Theory which is associated with the work of Kerr *et al* (1960).
- ii. Human Capital Theory which is associated with the work of Schultz, (1961); Becker, (1964); Sobel, (1978) .
- iii. Conflict Theories which are associated with the Marxist Correspondence theory of Bowles and Gintis and latterly with that of the Weberian theory of Collins (1977,1979) and Bourdieu and Passeron (1990) and Hickox and Moore (1992).
- iv. Contingency Theories (Fuller and Robinson, 1992, Robinson and Brown, 1994; and Ashton, and Green, 1996).
- v. The modified Weberian theory of Brown and Scase (1994).

### 3.2 A Critique of the Dominant Theories of the Education-Economy Relationship

#### 3.2.1 Technological-Functionalist theory of the Education-Economy Relationship

Technological-Functionalism assumed prominence in the fifties and early sixties at the height of the 'golden era' of the post war economic boom. It fitted in with the mood of the times because it optimistically predicted that technology would lead to an upgrading of the skill level of jobs. Two processes are involved: (a) the proportion of jobs requiring high skill increases and the proportion of jobs requiring low skills decreases; and (b) the same jobs are upgraded in skill requirement. Formal education provides the training, either in specific skills or in general capacities, necessary for the more highly skilled jobs because more educated employees are more productive. Therefore, educational requirements for employment constantly rise, and increasingly larger proportions of population are required to spend longer and longer periods in school (See Figure 3. 1).



**Figure 3-1:** Relationship between change and skills requirement (Collins, 1977:119).

While the technicist approach favoured by Kerr *et al* (1973) has gained prominence it fitted broadly into a functionalist view of the links between education, economy and society (Parsons, 1959; McClelland, 1961; Dreeben 1968 and Inkeles and Smith 1974). Perhaps the clearest articulation of this view has been given by Inkeles and Smith (1974). Their particular functional theory of modernisation is based on the notion that there is a direct causal link between five sets of variables, namely, modernising institutions, modern values, modern behaviour, modern society and economic development (Fagerlind. *et al*, 1983). These modern values and behaviours, knowledge, attitudes, and skills according to Parsons (1959), Inkeles and Smith (1974), and Dreeben (1968) are instilled in students by the authority structure,

curriculum, teachers, and peer networks. These students then develop an altered and expanded set of qualities that give them adult competence and prepares them to participate and achieve in the roles structured by modern society.

There are several problems with this rather optimistic scenario that critics in the 1970s pointed out. The first is that while functional theorists may have been right to observe that schools attempted to inculcate a universalism consistent with the principle of a meritocracy it was another matter altogether as to whether practice matched the rhetoric. This then raised the question of whether the picture painted by functionalists overemphasised consensus and harmony at the expense of social conflict (Bowles and Gintis, 1976). However, from the perspective of this thesis the key issue really turns on the precise linkages between education and the economy. Here the criticism is that functionalist theorists, especially those such as Kerr *et al* (1960) took the notion of the credential at face value that it reflected cognitive achievement. Therefore, when the demand for credentials rose it was assumed this was because jobs with cognitively higher levels of skills were being created.

But, as Hirsch (1977) observed credentials are positional goods. This means that they are goods which are scarce in a socially imposed sense, the more people obtain the good the less social value it has. This leads to two consequences. Firstly, to credential inflation since, for example, as increasing numbers gain an undergraduate degree so that degree becomes socially and economically devalued. The result is that the demand for higher degrees will increase. However, this leads to the second

consequence of screening because it requires ever more intellectual and financial resources to achieve higher levels of qualification. This insight has been taken a step further by conflict theorists such as (Bowles and Gintis, 1976) and Collins (1979) who argue that screening is also related to personality types associated with different social class and status groups. In order to establish and preserve their privileges elites will raise the level of qualification required. When these elites enter the labour market they are hired not for their technical expertise which may not require such a high level of credential attainment but for the type of person they are.

This line of thinking was supported by the work of Bourdieu (1977) who argued that the cultural capital of the home was consistent with the processes of formal education and that this is why elites are able to reproduce their privilege from generation to generation. But the curriculum of the school is what Bourdieu has called a *cultural arbitrary*, it has been moulded by particular elites who have then benefited from it. But since the predominant form of the curriculum has been academic it is unclear as to how the content of education could be related to economic needs. Rather it has appeared as if the only links between the education system and the economy during this Fordist period were those of credentials. Again, this raises questions about the Technological-Functionalist view of a correspondence between education and the economy. Many of the criticisms that can be made of Technological-Functionalism can also be made of the dominant economic theory of the education-economy relationship, human capital theory.

### 3.2.2 Human capital theory

Human capital theory is the basis for the economic analysis of education and training (Schultz, 1961; Becker, 1964; Mincer, 1958, 1962). The theory of human capital can be defined very broadly in terms of Skill acquisition. In modern human capital theory it is proposed that the process of human and physical capital accumulation are essentially analogous. This theory consists of four parts.

"...a) education is a commodity like any other, hence knowledge is a private good that can be purchased like any other; b) the theory claims to explain investment in education as a function of the basic human drive to secure wealth and status, since it is generally accepted that education over time, leads to greater income; c) it is asserted that differences in earnings reflect differences in productivity; d) the labour market, refers on one hand to the skills and abilities individuals are prepared to sell for a given wage and, on the other hand, to the demands employers have for specific kinds of labour in a near perfect labour market wages accurately reflect the skills people have ( Hughes and Lauder, 1991:6-8)."

The initial ideas about human capital theory were developed by US economists in the early post-war years, and in the modern sense human capital theory might be traced back to the work of these economists, mainly Schultz (1961 ), Mincer (1958; 1962) and Becker (1962). Human capital theory can be defined in terms of the neo-classical production function. This is indicated by an equation as follows :

$$Y = f(K, L, T, Q)$$

Y = output produced   K= physical capital   L = labour services

T= technical progress   Q= labour quality or human capital in addition to labour services.

Each factor of production has a price based on marginal productivity, and labour quality will have a price which equates the value of the marginal contribution to the cost of labour quality.

According to human capital theory, education and the economy form a set of self-reinforcing, reciprocal relations. The model explains the long-term growth of education as a consequence of the increasing technical efficiency of the economy, then argues that expansion of education, in turn, contributes to modernisation and economic growth through the capacity of schools to socialise individuals to new values, commitment, and skills (Rubinson *et al*, 1994).

Looked at from this perspective human capital theory can be seen as an economic gloss on technological-functionalism, which given its origins in the mid 1950s, is not surprising. All the problems raised in relation to the former can also be applied to this theory. It is unclear how traditional school curricula relate to economic productivity, it is merely assumed that credentials accurately reflect the possession of economically useful skills. Moreover any analysis of power relationships within the labour market



and between education and the labour market are further ruled out by the assumption that all individuals are motivated in the same way to invest in them through education. Yet the evidence suggests that even when students from different backgrounds have the same measured ability or educational qualifications they make fundamentally different choices as regards their careers (Bowles and Gintis, 1976; Hughes, 1990; Hughes and Lauder, 1991). Moreover if conflict theorists like Collins (1979) and Bowles and Gintis (1976) are correct, then the power relationships obtain in terms of recruitment and remuneration in the labour market<sup>i</sup>. Making links between credential, income and productivity is far looser than human capital theorists would assume.

### 3.2.3 Conflict Theories of the Education-Economy Relationship

Conflict theories of the relationship between education and the economy have been divided between Weberian based market theories of the reproduction of inequality through the education and credential system and Neo-Marxist theories which have emphasised the links between the demands of capitalist production and education. What both approaches have in common is a challenge to Technological-Functionalist and Human capital theorists' assumption that the links between education and the economy are essentially rational, meritocratic and hence progressive. For this reason the sociologists who developed these theories have been called 'radical'.

These radical sociologists in many ways differ in their explanation of how this relation between education and the economy developed historically and why it exists today.

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<sup>i</sup> See the work of labour market segmentation theorists such as Edwards, Reich and Gordon, (1975).

Within the general framework of radical reproduction approaches, theories differ on whether status or class is considered the major dimension of stratification. Most of these theories are Marxist in orientation (Bowles and Gintis, 1976; Carnoy and Levin 1985; Edwards, Gordon, and Reich, 1975; Braverman, 1977)<sup>i</sup>. In general, Marxist theories see the schools as instrument in preparing wage labour with the skills, values, and attitudes to accept the capitalist order and to contribute to capital accumulation (Carnoy, 1977). This is why they place the production system at the centre of explanation as well as class conflict between capitalists who own the means of production and workers who must sell their labour to capitalist to obtain income (Braverman, 1974; Bowles and Gintis, 1976; Edwards, 1979).

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<sup>i</sup> Labour market segmentation theory complements to radical theories of schooling. According to this theory it is the interests of capitalists and managers to have unemployment in the economy at all levels of skills in order to control workers demands and in order to play different groups of workers off against each other for employment security and a share of wage bill. The labour market segmentation model holds that there are numerous job categories in the labour market each with distinct criteria for hiring and advancement, supervisory procedures, working conditions and wage levels. These job categories are generally filled by different groups of employees. The labour market is divided into primary and secondary segmentation, which have different characteristics. The segmented labour market theory contends that labour markets are highly stratified: primary labour market jobs offer high wages, good working conditions, job security and advancement chances, while secondary labour market jobs lack these attributes. An important distinction should be made between segmentation which occurs before entry into the labour market (pre-market) which is what radical sociologists have primarily been concerned with and that which occurs while active in the labour market (in-market). Pre-market segmentation (PMS) denotes the differentiation of opportunities to enhance one's productive potential through schooling, formal training etc, before commencing employment. In-market segmentation (IMS) denotes the subsequent and further differentiation of opportunities with the market. The most explicit formation of this theory is provided by Gordon, Reich, and Edwards (1973) and Edwards, Reich and Gordon (1975). The differences between their view of segmentation and Piore's (1973) are largely based on their rejection of his assumption that "productivity" is basically a technical relation determined by the amount and type of machines available. For Gordon, Reich, and Edwards "productivity" is rooted primarily in social relations, not in a technical relation. Those whose incomes and status depend on maintaining their control over the production process are interested only in technological changes that will tighten their control over the production (Carnoy, 1977).

The key text in the Marxian tradition is that of Bowles and Gintis' *Schooling in Capitalist America* (1976). In this book they began by asking what the liberal ideology of the education system suggested was the function of schooling.

They found that three goals were central to the traditional liberal conception. First, education should be egalitarian in the sense of acting as an effective force for overcoming the natural, social and historical inequities that tend inexorably to rise in society. Second, education should be developmental in the sense of providing students with the means to develop the cognitive, physical, emotional, critical, and aesthetic powers they possess as individuals and as human beings. Third, education should be a means of what John Dewey has called the "social continuity of life". That is education should promote the smooth integration of individuals as fully functioning members of society.

They challenged all three of these assumptions on the basis of the argument that the critical problem in the articulation of schooling with advanced capitalism lies in its undemocratic structure of control over the process of production. Education prepares students to be workers through a correspondence between the social relations of production and the social relations of education. Like the division of labour in the capitalist enterprise, the educational system is a finely graded hierarchy of authority and control in which competition rather than co-operation governs the relations among participants, and an external reward system wages in the case of economy and grades in the case of schools. On the basis of this theory they argued

that schools did not enhance human development but shaped it according to social class and capitalist development. And, rather than promoting greater equality, opportunities were again determined by social class. Their theory can be characterised as follows (See Figure 3.2):

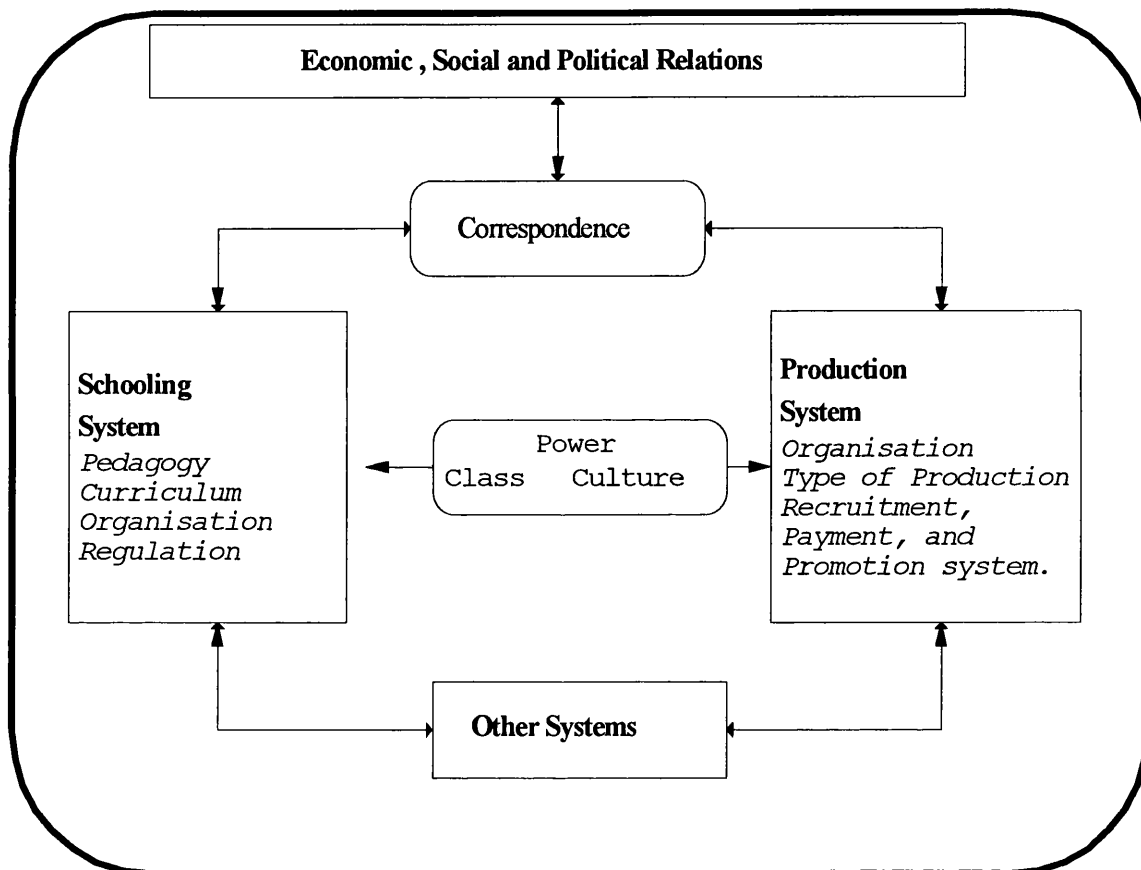


Figure 3.1: Correspondence between the schooling system and economic system

In this theory Bowles and Gintis argued that there was an essential continuity between the experiences of socialisation in the home, the hidden curriculum of the school and the demands of work. For example, relying on the work of Kohn, (1969) they argued

that working class students had low aspirations and an essentially passive view of how they could operate upon the world reflecting their parents' experiences. In contrast those from professional backgrounds reflected their parents' high aspirations and expectations that they could make an impact on the world. In school working class student's socialisation was reinforced by an authoritarian structure and regimes of rote learning where little was expected of students except to conform. The experiences of home and school then fitted these working class students for life on the Fordist production line. In contrast, those from what Bowles and Gintis termed the ruling class, had an elite education in which, within limits, they were expected to exercise judgement and discretion in the work they undertook at school and later at the elite Ivy League colleges. However, Bowles and Gintis emphasise that the autonomy that these students enjoyed was nevertheless within a environment characterised by creative conformity.

There are several criticisms that can be made of the Correspondence theory<sup>i</sup>, some of which are common to all the Radical sociologists discussed in this thesis. Therefore, it is worth confining criticism at this stage to one which will prove significant to

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<sup>i</sup> Apart from the criticisms against Bowles and Gintis theories discussed above Hogan, Sarup and Livingston also hold opposing viewpoints. Hogan (1979 ) points out that their reliance on a very generalised conception of structural contradictions and class struggles were regarded as to obscuring to class formation and class conflict over the structure and content of education. Sarup (1978, 1982) asserts that Bowls and Gintis focused on the structural forms of social relations in both workplaces and schools . This emphasis obscuring the roles of actual historical class agencies, especially in the virtual absence of any specification of working class culture and very limited attention to resistance through working class politics. Livingstone (1983) argues that Bowles and Gintis defined the capitalist and working class in terms of production relations, thereby ignoring both the possible autonomy of the household and community spheres in class relations of education. Some scholars asserts that Bowles and Gintis' theory was insensitive to differences between abstract analysis of capitalism as a global, epochal system and the specific development of concret social formations;

this thesis. This concerns their treatment of the overt, rather than hidden curriculum as irrelevant to either equality of opportunity or to processes of socialisation. In other words, they ignore what in subsequent debates about the relevance of schooling to work became a key issue: the academic curriculum.

As Hickox and Moore (1992) have argued, the relationship between education and the economy in the Fordist era was weak because industry allowed the education system to develop in a relatively autonomous way. The key link between the two sectors was the credentials. Debate about the relevance of the curriculum to the economy was particularly widespread in Britain. In 1977 James Callaghan, the Prime Minister of the time launched a bitter attack on the failure of education to be relevant to economic needs in what has become known as the Ruskin College speech. It also explains why in the eighties greater efforts were made to develop school-business partnerships (Jamieson, 1985). Later I will return to this issue because it figures prominently in my research.

The question of the apparent irrelevance of much of the school and college curriculum to the economy is best taken up by two theorists Collins (1979) and Bourdieu (1977) who can both explain the relative 'autonomy' of the school and college curriculum. Collins (1979) argues that the expansion of education reflects less the growing technical needs of the economy than the effects of competing status groups for

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especially, they perceived as overlooking the distinct roles of the state in shaping education in such

wealth, power, and prestige. Instead of teaching technical skills, Collins suggests that the main activity of schools, is to teach particular status cultures, both in and outside the classroom. In developing this argument Collins' sees beyond the credential to the power relationships that lie behind it, arguing that privilege and character which comprise his screening hypothesis had more to do with social background in which character might be better defined in terms of the manners of a social elite rather than in terms of specific characteristics needed for economic productivity. As he says,

"From this perspective it is not important for schools to impart technical knowledge, but they must indicate " vocabulary and inflection, styles of dress, aesthetic tastes, values and manners" (Collins 1979: 150).

The theme of the relative autonomy of education being explained by a cultural struggle for privilege is taken up and developed by Bourdieu (1977).

### 3.2.3.1 Class and Cultural Capital

Bourdieu (1977) describe the way in which schools legitimatise the dominant culture, by presenting as natural a form of pedagogy which belongs, in fact, to only the dominant groups in society. Bourdieu argues that we should think of cultural capital in the same way we think of economic capital. Just as our dominant economic institutions are structured to favour those who already possess economic capital, so our educational institutions are structured to favour those who already possess cultural capital, defined according to the criteria of the dominant élites in society. Schools, he argues, take the cultural capital of the

dominant group and treat all children as if they had equal access to it. Hence the cultural capital that the schools take for granted acts as a most effective filter in the reproductive process of a hierarchical society. The education system organises itself in terms of the imperative of its own reproduction. Crucially, he argues that the school has a relative autonomy with respect to the economy with its own rhythm of evolution. The main interplay between the systems "education" and "production" is the conjunction between formal qualifications and jobs.

### 3.2.3.2 Criticisms of the Radical Sociologists

These kinds of observation give support to the radical view. First, studies have shown that there is only a loose relationship between what is studied in school and kinds of work that most people are doing. Second, other studies have found that within job categories, there is little correlation between a worker's level of education and economic productivity. And third, still other studies have revealed that the level of education required by employers for job entry and the amounts of education workers bring to their jobs are considerably higher than actually required to do the work (Rubinson, 1986).

The essence of the radical sociologists position centres on credentials. Individuals are allocated to jobs and other adult roles on the basis of their educational credentials, apart from anything they may have learned in school. Schools may not socialise, but they certainly select, certify, and allocate. If schools simply sort and certify individuals, transforming students' social class backgrounds into educational



credentials, then education has no necessary effects on the economy or society as a whole. Educational credentials then allocate individuals into a zero-sum or fixed structure, affecting the distribution of individuals but not altering the social structure or increasing economic growth.

The theories of the radical sociologists certainly provided a useful corrective to the naive and optimistic theories of technological-functionalists and human capital theorists, introducing the key concepts of power and conflict into the analysis of the education-economy relationship. The fundamental problem confronting the radical sociologists' analysis of Fordism concerns that fact that when their theories are taken to their logical conclusion there appears to be no link between the expansion of schooling changes in technology or the upgrading of skills. Consequently, education does not necessarily increase economic growth or labour productivity ( Robinson 1986; Fuller 1991).

However, it is highly unlikely that education and training can have no connection to economic productivity, if they did not then employers in countries like Germany and Japan who have placed so much store and invested so much in skills as the motor of economic productivity would have to be considered mistaken in their view.

In the UK evidence of the importance of the need to develop links between education and the economy can be gained from the attempts to establish industry-education business partnerships in the 1980s. In this case the UK had the evidence from Germany and Japan to suggest that these links were important, although the form they

took clearly differed between the different countries<sup>i</sup>. The factors leading to the emergence of the idea of partnership during this period of economic transition, have been grouped by Woolhouse (1991) under five reasons (a) the economic challenge of survival in competitive markets; (b) social mobility and pursuit of equality of opportunity; (c) the need to enhance the quality of learning and relevant skills for work; (d) new innovations and methods of collaborative learning and training. (e) specific labour market skills requirements. These major reasons in establishing links between schools and industry resulted in considerable pressure to change school from both within and without schools. Inside schools pupils wanted more freedom and variety, parents wanted more relevant skills for the labour market, teachers more autonomy for themselves in defining the curriculum and schools programmes. From the out side, according to Jamieson (1985), central government, local employers, and ad hoc projects and organisations pushed for change in the education-business relationship. Consequently, this period established the assumption that schools must be more closely involved with the needs and demands of business. If, in the Fordist era there was little or no connection between education and the economy the assumption in the post-Fordist era is that education must be vocationalised (Grubb, 1986; Ashton and Sung, 1997) if national economies are to remain competitive.

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<sup>i</sup> There are different forms of skill formation. Three models for initial vocational education/training and international provision of skill formation have been identified by developed countries (OECD, 1985); Germany, Switzerland and Austria have a dual model. Belgium, Sweden, Japan, or North America follow the schooling model whilst Britain address to a mixed model (Furth, 1985 quoted from Ashton *et al.*, 1996). In the schooling or full-time model, students spend most of their education and training at school or college and limited part of the training period is spent as a trainee in firms. The dual model places emphasis on a combination of schooling and in-company training and part-time and full-time vocational training courses are provided. And mixed model is provided for youths outside the schools in a non-formal sector.

Even if much of the economic development in the UK and the United States is neo rather than 'post-Fordist' as Brown and Lauder (1997) argue, the evidence suggests that levels of numeracy and literacy necessary for economic productivity are rising (Murnane and Levy, 1993) and that some form of upskilling is taking place for all but the semi and unskilled workers (Gallie and White, 1993).

If skills are in fact related to the economy, it follows that the static analysis presupposed by the Correspondence theory of Bowles and Gintis (1976) or the zero sum assumption of a fixed social structure would not stand up to analysis. Rather as Robinson and Browne (1994) and Ashton and Green (1996) have argued the links between education and the economy are always contingent and subject to constant readjustment. In part this is because there is a political struggle over the selection and allocation of skilled individuals in the way the radical sociologists suggest and in part because the demand for skills is constantly changing. In this respect, the work of Ashton and his associates is of particular interest because it seeks to integrate the insights radical sociologists have on power and conflict with the idea that education and skill development are central to economic development (Ashton and Sung, 1997).

#### 3.2.4 Contingency Theory in the Work of Ashton and his Colleagues

In searching to elaborate a dynamic approach to skill formation David Ashton and Francis Green (1996) argue that education and training in the period of global economy is more significant than during the Fordist period. They have tried to give a more complete understanding of the link between modern education and training

systems and modern capitalist economies in particular. They elaborate a theory of skill formation systems that defines the institutional conditions necessary for achieving higher levels of skill formation as follows:

- a) A fraction of the ruling class, specifically those in control of state apparatus, must be committed to the goal of achieving a high level of skill formation and the innovative use of the productive system;
- b) high levels of competency must be produced by schools in language, mathematics, and information technology;
- c) there must be a commitment by a group of leading employers to the goals of high-level skill formation;
- d) there must be some form of regulation and accountability in the process of skill formation in the workplace;
- e) workers and prospective workers must themselves become committed to the goal of skill formation and continuous development at work;
- f) links need to be organised in which work-based(on-the-job) learning can be complemented by off-the job training in the knowledge base of the skills.

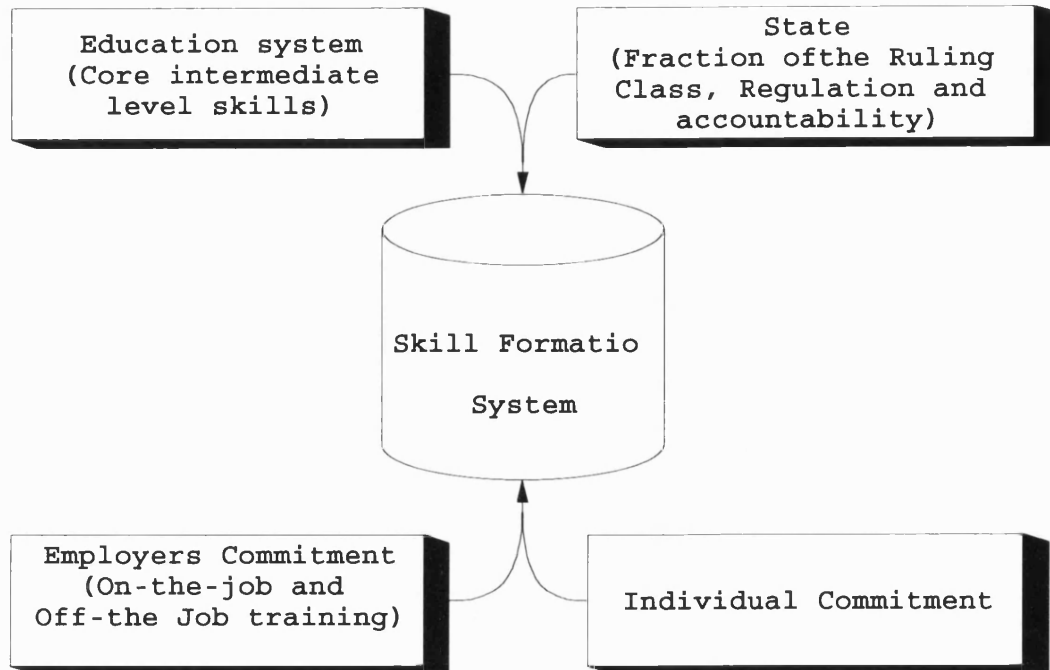


Figure 3-1: Theory of institutional requirements for skill formation systems (Ashton, D. *et al.* 1996).

The main aspect of this theory takes into account the role of government, education and schools, employers, and appropriate policy making. This theory claims that skill formation first of all requires a government commitment to provide equal opportunities for all children because marketisation of education reinforces inequalities in society. Also in order to provoke a culture of commitment and continuity among employers, and employees developing suitable mechanisms, regulations and accountability are fundamental to the process of skill formation. Schools have a vital role in providing high levels of core intermediate level academic skills. However, employers are required to participate in the process of skill formation, since the reorganisation of the workplace is an important source of learning. In supporting and completing the process of skills formation through the

schooling system it is essential that employers develop a system in which on-the-job learning is supported by off-the-job training. Apart from government, employers and the educational system, individuals must be motivated to actively participate in the process of learning and skill formation. They hypothesise that low-skill routes is due to inability of the economics in developing the institutional requirements for skill formation. In looking at the origins of commitment to high skills process the authors take a broad historical approach to state formation and industrialisation. They argue that the national links between education and the economy in UK and USA developed a low-skill route while in Germany, Japan and the new Asian countries there is a high-skill route. They claim that the former countries developed the process of industrialisation in an environment of a quite poorly educated Fordist working class while in the latter countries, at the time of industrialisation the ruling elites saw particular merit in developing the education, including the technical skills, of the working classes. Indeed, the sort of criteria developed by Ashton and Green form a useful checklist by which a national commitment to post-Fordist skill formation can be judged. We shall make use of their criteria subsequently.

If Ashton and his colleagues have made a major advance on early theorists of the education-economy relationship a further step has been taken by Brown and Scase (1994)<sup>i</sup>. The advance they have made is to link the changing nature of skills demanded in a post-Fordist economy to questions of character or personality. The

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<sup>i</sup> It could be argued that Ashton *et al* do not highlight the role that character plays in the links between education and the economy because their fundamental focus is on Singapore where much of

key link, drawn by radical sociologists during the Fordist era, between education and the economy was that of the credentials. However, the idea of character was introduced either through a process of class conformity in the work of Bowles and Gintis (1976) or by character formed as a set of manners that conformed to the expectations of ruling elites (Collins, 1979). In neither case was character related to economic productivity. However, in the work of Brown and Scase it becomes central.

### 3.2.5 The Modified Weberian Conflict Theory of Brown and Scase

Brown and Scase (1994) begin from the observation that accompanying changes in technology and global competition have been changes in the way corporations are structured from bureaucratic to adaptive organisations. In describing the shift from bureaucratic to adaptive organisations they focus on three factors- the oil crisis of 1973, the rapid industrialisation of Pacific Rim countries, and the emergence of widespread views about the domination of organised labour over management. Also, other factors such as cost effectiveness, pressure in public and private organisations, demands for efficiency in uncertain labour market caused organisational change. These forces led senior-managers who were anxious to encourage entrepreneurial and creative individuals to make organisations into more open, flexible, and informal environments. The characteristics of bureaucratic and adoptive organisation are described in table 3.1

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the socialisation is undertaken by the state for the society as a whole, rather than the schools. Brown and Scase are primarily interested in the issues relating to character.

Characteristics	Bureaucratic organisation	Adaptive organisation
Selection	Individual attributes	Personal Qualities
	De-personalised	Personality package
Socialisation	Compartmentalised	Holistic
	Inter-Positional	Inter-personal
	Rule Following	Code cracking, rule making
Cognitive sly	Bureaucratic personality	Charismatic personality
Symbolic/	Impersonal	Personalised
Social Control	Explicit ground rules	Implicit ground rules
Promotion/ success	Explicit achievement criteria based on bureaucratic work programme	Implicit achievement criteria based on inter-personal compatibility and performance
Corporate culture	Weak	Strong

Table 3-1: The modified Weberian theory of Brown and Scase (1994)

The key to understanding Brown and Scase's theory is that they clearly see the kind of personality required by adaptive organisations as being productive. Nevertheless they also see considerable inequalities of opportunity arising from the processes of education and selection involved in recruitment to the new corporation. They argue that:

"...it is no longer enough to acquire the appropriate credentials and to show evidence of technical competence. It is now the whole person who is on show and at stake in the market..." (Brown and Scase, 1994:22)."



This has implications for discrimination for as they go on to suggest:

"...paradoxically, or rather predictably in Britain, the increasing importance attached to group and teamwork becomes translated into the need for 'safe bets', that is people with the appropriate cultural capital who will understand the 'invisible' cultural code that has replaced the 'visible' bureaucracy. In other words, it requires people it can 'trust'. This can put those of working-class origins, women and ethnic minorities at a distinct disadvantage. (Brown and Scase, 1994:23)."

While Brown and Scase concentrate on those seeking entry to professional and managerial jobs it can be argued that 'post-Fordist' innovation requires leadership, teamwork and a willingness to be innovative right through corporations to the shop floor. It is precisely for this reason that the notion of key skills has assumed such an important position in the debate over the future skills of the workforce.

Against the background of this debate Ashton and colleagues and Brown and Scase provide an updated way of theorising the links between education and the contemporary economy. What they don't do explicitly is to link education and skill formation to the contrasting paths of neo and 'post-Fordism'. Although the analysis of the basic institutional conditions necessary for a high skills economy described by Ashton and Green (1996) clearly provide a framework for determining the degree to which any society is likely to develop a neo or post-Fordist economy. In addition, it could be hypothesised that key skills will be used in different ways in the different types of economic development. More specifically, that in a neo-Fordist economy they may be used primarily for purposes of selection, and social control. This is because in such an economy the aim is to be competitive by cutting costs rather than

competing by producing quality goods. Hence what is required of workers is compliance rather than initiative. In a 'post-Fordist' economy the emphasis will shift more towards a concern with harnessing key skills to quality production. Here initiative and the ability to make sound decisions and judgements as part of a team will be crucial. So the ability to communicate well and problem solve in co-operation with others is also important in a way in which it is less so in a neo-Fordist economy<sup>i</sup>.

### 3.3 Post-Fordism and the Requirements of Education

If the kind of workers required in both neo and post-Fordist organisations are fairly clear in theory, the question remains as to what the school's contribution to the development of the worker-citizen should be. Here, the education system in general, and schools in particular, are presented with a series of problems. The first is whether schools should be involved in the servicing of a neo-Fordist economy when clearly it requires 'producing' individuals who are compliant and not encouraged to develop their learning potential. There is a sounder rationale, in theory, for teaching for a 'post-Fordist' economy since as the 'optimists' view it, it provides for far greater autonomy and the fulfilment of human potential. Although, the critics of optimists like Brown and Lauder (1992) point out that that post-Fordism is still capitalism and

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<sup>i</sup> Evidence that qualifications are used by employers in different ways (i) as a device of filtering and choosing the appropriate person (Cumin, 1983 Ashton *et al*, 1983 ). Maguire (1986) demonstrates, employers do not (in practice) place much emphasis on educational qualifications as school often imagine they do; (ii) at the higher levels of the occupational hierarchy, qualifications are often necessary but not sufficient; employers use them as a convenient pre-selection device when deciding which applicants should be interviewed. little attention is paid to them subsequent to hiring, which is consistent with Brown and Scase (1994); (iii) at the lower occupational levels, qualifications are frequently used simply as crude measures as a symbol of hard work not of cognitive abilities

therefore has limited radical potential. Furthermore it may blunt whatever radical potential schooling may have by incorporating it into what is an exploitative economic system (Sharp, 1996).

Given these varying views we are still left with a series of key questions. These can be illuminated by considering some of the prescriptions that have been made for education in the future. For Mathews, *et al* ( 1989) and Young (1992) to accommodate to changes in industrial economies we need a flexible curriculum on the following principles: breadth and flexibility in a broad base of knowledge; flexible connections between core and specialist knowledge and general (academic) and applied (vocational) studies; emphasis will need to be placed, in the primary and secondary years of schooling, on the development of resourcefulness, cooperativeness, independence and problem-solving ability, as well as on mathematics, science, technology studies, literacy, and basic technical skills. Opportunities will need to be provided so that students can connect knowledge in different areas and relate theory to practice in a variety of contexts. Similarly, Berryman (1996) has also listed the requirements she considers necessary for an apprenticeship pedagogy which could equally apply to schools. These include:

- i) a focus on the conditions of application of the knowledge and skills being learned;
- ii) taking into account the learner's original ideas, and the staging of discrepant or confirming experiences to stimulate questions, and

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(Watts,1983). These various uses of credentials suggest that key skills may be used differentially as well.

encourage the generation of a range of responses with the opportunity to apply these in various situations; and

- iii) an emphasis on learning in context. Assessment should be focused on authentic learning outcome measures based on demonstration and performance of competence.

Underlying this thinking is a vision of close links between learning and work utilising:

"...work-related cognitive, inter-personal and manual skills, theoretical and applied general knowledge and specific knowledge and information. (Thurly *et al*, 1990)."

The means to achieving these aims, it is argued, relate to an emphasis on project work, teamwork, and self-directed study. In this scenario teachers are seen as facilitators of learning; emphasising cognitive learning skills with the ability to transfer skill. The curriculum should not only focus on maths, science and technology but also on information technology; tasks should be open-ended with a closer integration of manual and mental tasks. This view also assumes a capability and necessity for collaboration in both setting and achieving goals, and for negotiation of roles and responsibilities requiring skills in communication, teamwork, and problem solving. The focus is on learning, not specifically on either training or education (Marsick, 1987) rather through learning these dispositions and abilities the division between education and training is transcended. Overall, we can summarise the differences in Fordist and 'post-Fordist' orientations to learning as described in table 3.2.

Characteristic	Mechanistic or Fordism Theory	Organistics or Post-Fordism Theory
Work process and skill formation	<p>Weakness of relation between economy and Schools</p> <p>Fragmented and standardised tasks; strict division between mental and manual labour; semi-skilled labour</p> <p>Little on the job training for most workers;</p> <p>Emphasis on bringing skills from the external labour market</p> <p>Encourage transition from education to work</p> <p>Curriculum emphasis take place academic subjects</p> <p>Education emphasises good discipline and respect for authority</p> <p>Knowledge acquired once and for all</p>	<p>Close relationship between economy and schools</p> <p>Open-ended tasks/closer integration of manual and mental tasks/core of multi-skilled workers linked to sub-contract and semi-skilled labour</p> <p>Emphasis on project work, teamwork, multi-skilling</p> <p>Emphasis on develop skills by internal labour market</p> <p>Greater demand for 'knowledgeable' workers;</p> <p>Continuous skill formation;</p> <p>Emphasis on project work, teamwork, and self-directed study;</p> <p>Teacher seen as facilitators of learning;</p> <p>Emphasis on cognitive learning skills with the contexts to promote transferable skill.</p> <p>Emphasis on key skills such as communication, problem solving and teamwork</p> <p>Curriculum not only focuses on maths, science and technology but also it is more emphasis on information and know-how.</p>

Table 3-1: The relationship of school to work according to Fordist and 'post-Fordist theory

### 3.4 Education for 'Post-Fordist Work: Problems and Issues

This is an ambitious set of aims and while some of the techniques have been well established and practised for some time, others are still in their infancy. In addition, the list presented here is a long one and clearly priorities will have to be set. But

while researchers such as Marsick (1987) believe that learning can overcome some of the institutional divides between education and training there still appear to be some contradictions especially between formal education and training in industry. Here there are two key issues. The first concerns the fundamental question of an academic curriculum versus the needs of industry. If we look at the national curriculum for secondary schools in England and Wales it is clear that it is still very much based on an academic curriculum, although there is a common entitlement for work related provision for all students (Saunders, *et al.*, 1997). The key question here is whether employers view such a curriculum as appropriate to their needs. While this issue appears to be intractable there is another raised by Brown *et al* (1997) who point out that while teamwork is considered to be fundamental to 'post-Fordist' organisations:

"...group work [in education] has tended to be frowned upon because the democratisation of education opportunities has depended upon the individuation of success and failure. Ability and performance is assumed to be judged on an individual basis (p.10)."

As a result while industry stresses co-operative problem solving, education still judges students on individual performance.

The final problem concerns the nature of key skills, the ability to communicate, work in a team and problem-solve for they are considered fundamental to 'post-Fordist' production techniques. Even if schools could overcome the emphasis on judging individuals' performance questions remain as to whether, and in what ways, schools could and should teach the key skills. It is to issues relating to key skills that we turn in the next chapter.



## **4 The Economic and Social Framework of the Key Skills Debate**

### **4.1 Introduction: The Significance of Key Skills**

Many commentators believe that the economic transition to 'post-Fordism' is marked by flexibility, fast response times, managerial and technological innovations. The system which seems best suited to this speed and flexibility are variants of what has become known as the Japanese Mode of Production (JPM) (Elgar and Smith, 1994). Under Fordism there was little room for worker autonomy and judgement, under JPM there are a crucial set of skills required by workers which involve co-operation and human interaction. These forms of interaction have centred on the introduction of Japanese companies innovations such as quality circles, quality control, just-in-time techniques, and total quality management. It is in car manufacturing that these new social relations of production have been most prominently introduced. For instance, Durand, *et al* (1999) have pointed out that teamwork, which has now become general in automobile factories and firms, originates in Japan. These innovations required workers to quickly make decisions and solve problems in participating in high quality production. They firmly believe that by training and educating people well in these forms of interaction, which have become known as key or core skills, it makes them extremely flexible. In the past ten years, many Japanese manufacturers, especially automobile manufacturers, have with these sorts of technique opened plants in the United States, UK and other European countries. The success of Japanese industry and especially that of car manufacture has made researchers, commentators, and rival



companies in other advanced countries look at the reasons for this achievement. The lessons they have learned from Japanese transplants have led different business organisations to start learning and implementing its principles. Central to this process of learning and adoption has been the idea of key skills.

Consequently since the 80's there has been increasing evidence of a rhetoric taking place in industry and educational systems towards providing a training and education which is much more integrated with the knowledge, skills, and attitudes required for work under the conditions of an adapted form of the JPM. In particular focusing on the key skills of teamwork, communication, problem solving and IT literacy combined with higher standards of numeracy and literacy.

However, it is also clear that consistent with the ideal types of neo and post-Fordist trajectories, the degree to which the workforce is numerate and literate and how the key skills are used will differ between these trajectories. While it is the case of both neo and post-Fordist trajectories workers require increasingly higher levels of preparatory education (Murnane and Levy, 1993) there are clearly differences in the educational and training demands made by neo and post-Fordist organisations. In neo-Fordist organisations we can expect multi-tasking as opposed to multi skilling, where the tasks carried out are all relatively easy to learn through brief on the job training and where there is little discretion given to the judgements of workers, either individually or in teams. In contrast post-Fordist organisations workers will be multi-skilled, training will consequently be more extensive and there will be greater

autonomy for individuals and groups to exercise their judgement. It follows that while the rhetoric about the importance of key skills may be widespread the way key skills will actually be used will be different in the two ideal typical kinds of organisation.

Drawing on the discussion of the previous chapter we can hypothesise that there will be a continuum in the way key skills are used. In neo-Fordist organisations we can expect key skills to be used as mechanisms of selection, compliance and surveillance. Here teamwork will be used as a metaphor for individuals who are compliant and 'will fit in', and do as they are told in terms of multitasking. For example, in their study of Nissan at Sunderland, cited above, Garrahan *et al* (1992) argue that:

"... teamwork is supposed to put employees in the centre of decision-making for their work and achievement and give them more power in the workplace. But what occurs is not worker multi-skilling, but relative inflexibility, participation without determination and involvement without control. Also teamwork and JIT have two faces, simplifying the tasks so workers can pick them up quickly, to reduces costs of training and at the same time, creates a situation which makes much easier transferring knowledge from workers to managers" (p.62)."

Similarly, Graham (1994) who worked as a hidden participant/observer at the Subaru-Isuzu Automotive plant in Indiana concluded that organising work around the team could control workers in three ways. As a form of self-discipline because in this system everybody as a member of group has responsibilities; peer pressure in the case

of failing self-discipline; team leader pressure since ultimately the responsibility for delivery rests on the team leader.

Communication skills will be used as a metaphor to judge whether workers are likely to be resisters or express a 'positive' attitude to work. In these ways key skills are used as mechanisms of control. In contrast in post-Fordist organisations key skills will be used to add value by genuinely using the judgements of teams and individuals.

This continuum is a matter of emphasis. Even in post-Fordist organisations elements of control will be maintained and judgements about key skills will be used to hire, control and fire workers. But in Post-Fordist organisations we would also expect to see far more by way of training and genuine teamwork and collective problem solving.

Given the importance placed on key skills there has recently developed a debate about the nature and relationship between key/generic skills and 'post-Fordist ' production. The discussion has centred on the following questions: What are the key skills and how they used in systems of production? How are the key skills used in the selection for jobs? Can key skills be taught, and if so, how? This chapter is going to explore these issues. It focuses on a review of the literature to closely examine these issues in relation to schools and large companies. There are at least three problems confronting the issue of why and how we best develop the key skills for industry.

First there is the question of the irrationality of key/core skills. Here the argument is that key skills lack philosophical or empirical support and are entirely illusory. The

argument claims notions like teamwork, communication and problem solving are so vague that they can mean almost anything to anyone. Consequently they are better understood as employer rhetoric which masks new techniques of surveillance and control. Secondly, there is a question about whether key skills are organisation and occupational specific in nature, because they are so intimately tied to the culture and tacit knowledge of an organisation or whether they are generic. This is an important question because it raises two further issues: whether key skills can be transferred from organisation to organisation and whether they can be taught in schools or further education institutions. If they are generic it raises questions about the teachability of key skills and the methodology in teaching and learning of key skills.

So this chapter is concerned to address our understanding of the theoretical debate around key/core skills as it has been manifested by commentators, employers, managers, and workers.

## 4.2 Addressing the Key/Core Skills Debate

### 4.2.1 The Irrationality of Key/Core Skills

According to Cohen, *et al.*, (1984) introducing key skills as transferable skills is part of the hidden plan of redeployment of workers by employers, given the advent of new technology, believing that in reality transferable skills correspond to the process of deskilling by the new technology revolution. Accordingly, Darrah, (1994) highlighted that managers and supervisors described higher order skills such as initiative, planning

and performing multi-tasks as flexibility. While, workers asserted that higher order skills require huge amounts of time to managing the work, and reducing the opportunity of being flexible at work.

This kind of perspective on post-Fordist management is part of a long neo-Marxist tradition on the control and proletarianisation of skill. Marglin (1974), argued that deskilling was a conscious management decision taken to increase control over workers and make the management process easier. Garrahan and Stewart's discussion (1992) can be seen as in the same tradition.

It is part of the argument of this thesis that under neo-Fordism the application of key skills as a mechanism of control described by neo-Marxists may well be the case. But this might also be only a partial analysis in that where firms are close to the ideal of a post-Fordist organisation then they will be used differently.

However, a further reason why it is possible to assert that the term "key skills" is irrational is because it is difficult to pin down their meaning and how they function. There is no doubt that these key skills are present in many central documents about the future skill needs of the workforce around the world, for example Cumming (1987) in Australia, The Conference Board of Canada (1992), EUROTECNET (1994), The East Kent TEC (1995) and Hill, *et al* (1998) in New Zealand. (See Appendix 4.1 for a report on these studies). The problem with these lists of desirable qualities is that all the questions about key skills raised above remain. They cannot tell us anything about how these terms are interpreted or used within schools or organisations. But when

we look to the research for help in deepening our understanding the knowledge and insights gained are limited. This is because many research designs stop at asking employers what they are looking for. Research which simply asks employers what skills they want is relatively superficial, it cannot be determine from it how key skills are used and whether they are firm or occupation specific or whether they are generic, far less whether they can be taught. However it should be said that if these skills were solely used as a mask to control workers then a lot of time and energy has been put into seeking to understand and develop them. It is through the work on whether these skills are organisationally or occupationally specific that we begin to gain a deeper understanding of how they can be used within organisation and crucially whether they can and should be taught in schools.

#### 4.2.2 The context and function of key skills: Are they contextually specific or are they generic?

The second question is about the domain specific nature of key skills. There are two research traditions that can be drawn upon to find answers to the central questions of how key skills function in an organisation and the degree to which they are organisationally or occupationally specific or generic or some combination of these. The first concerns qualitative observation of the way workers in specific organisations use key skills, and the second concerns the notion of situated learning.

One of the best examples of the first traditions is the work of Stasz. *et al* (1997). Her work is of specific interest because she is concerned with the further question of

whether key skills can be taught. Stasz, *et al.* (1997) have researched workplace skills in practice, focusing on three skill areas: problem solving, communications, and teamwork-as well as work-related dispositions. They claim that the new workplace emphasises a shift in decision making and problem solving from the supervisory level to the shop floor, where workers must cope on the spot with a growing number of unpredictable problems. Communications skills, both with speech and text, are widely cited by them as among the most important skills they identified for today's workers. The Stasz, *et al* study provides a rich picture of skills and dispositions in work. They pointed to three important results. Firstly, generic key skills and dispositions are important in work and to workers but that they vary within the work context. Secondly, employers do not necessarily understand the skill requirements of their front-line workforce, therefore they may lack effective strategies for developing workforce skills. Also employers do little to foster skill development among non-managerial workers and sometimes take courses of action that undermine skill development. And thirdly, employers have weak connections with education providers for supporting acquisition or development of workforce skills.

The second tradition concerns the work of theorists of situated learning and cognition. In this sense one could say that many commentators (Rogoff & Lave, 1984; Collins *et al*, 1989; Gott, 1989, Thurly, and Lam, 1990; Lave & Wenger, 1991; Billett, 1992, 1994;; Darrah, 1994; Stasz, *et al*, 1990, 1995) have pointed out that skill requirements have a social domain and are constructed through a social process.

One school of thought is the theory of social and cultural skills development. This theory argues that knowledge is domain-specific and is not objective. This theory which is attributed to Vygotsky, who in the 1920s, proposed learning as an interaction between two individuals, in which its nature and context are determined by social relations and the socio-historical nature of the knowledge and the culture in which it occurs. Language is the tool of learning. Vygotsky addresses the main query of how individuals learn, by asking how do individuals construct meaning. Intrinsic to Vygotsky's sociocultural theory is the notion that social experiences shape the ways that individuals think and interpret their world. Thus individual student cognition occurs in a social situation, and is inseparable from it. Vygotsky (1978) asserted that skills have a social systemic nature and they are not related to individuals. This insights have given rise to the paradigm of situated cognition or situated learning which proposes that learning is situated within the context in which it is constructed. That is, knowledge is not an objective entity distinct from the context in which it is learned but rather is an integral component of the context in which it is constructed and of the activity in which the learner is engaged during construction. Indeed, as Griffiths (1987) commented skill is not an emotionally neutral word. It carries a miasma of political and educational connotations as well as a variety of more ordinary language ones. Thurlly and Lam, (1990) in their study of the development of skill formation of electronic engineers believe that skill formation is connected to the work roles or tasks determined by specific organisations.



"...this approach sees the skill formation process and the learning associated with it as a by-product of the task organisation system in which the work role is located. They assert that the structure of the socio-technical work (task) organisation actually experienced by individuals is one main determinant of the skill formation process. Other crucial determinants are the culture or values dominant in the task organisation and the rewards and reactions related to learning, the perceptions and expectations of the individuals concerned on the relevance of learning to the work role; the learning skills and capacity of those individuals and finally, but not least, the degree of identity felt by them in their work roles(p.12)".

They emphasize that the implication of this approach is that "private" learning may be taking place which has nothing to do with the skill formation which is related to actual work roles. Organisations might be spending a great deal on sending their employees to off-the-job training, but the level of actual skill formation could still be low. Skill formation is "effective" only in relation to the norms and objectives of the organisation itself. The same points could be made about a narrow vocationally oriented education system. To put it another way, Thurly, *et al.*, (1990) state that learning takes place through daily interaction and experience within the organisation, whether or not it has been structured by trainers. It is also self-directed and self-monitored and includes informal modes such as coaching, mentoring, and working groups focused around a specific task. Indeed, as Ford (1989) points out developing successful skill formation strategies requires an understanding and responsiveness to broader organisational relations. For example, the just-in-time organisational concept developed by Toyota in its home base in Japan requires a very sophisticated development of organisational relations. In the field of higher level skill formation, Toyota has developed the Toyota Institute of Technology to ensure that all

organisation in the Toyota network, could develop the engineering skills necessary for continual integrated innovation.

As Lauder and Brown have noted (1999) according to Koike and Inoki (1990) the ability to constantly adapt is partly a function of the repeated transmission of new skills. This transmission is incremental and is aided by the culture and history of a corporation which enables the acquisition of the tacit knowledge necessary for skilled performances. In making these observations they rely on Polanyi's distinction between scientific knowledge and that of discrete things, times and places. Both are necessary in the production process and are embodied in what Polanyi called personal knowledge. But as Koike and Inoki note acquiring personal knowledge requires interaction between teacher and learner to produce a skill that is often indefinable. As they put it,

the colour of the fire for baking ceramics, the doctor's diagnosis of an illness, the condition of the cutting sensed by the machine tool operator are types of knowledge also having the property of incomplete expressible through either words or pictures (p.44).

The issue of tacit knowledge and the institutional role in its transference is central to an understanding of how skills are diffused at the individual or micro level. In the broader context the significance of a flexibly skilled internal labour market based on a job for life becomes clear when placed against the demands made on workers for constant innovation within a zero defect production system.

Billett<sup>i</sup>, (1992, 1994) study with skilled workers in the retail, secondary processing, transport, hospitality and other industries, aimed to compare three modes of vocational skill development and their effectiveness for pre-employment, integrated (apprenticeship) and on-the-job learning. The outcome also showed strong support for learning situated in the workplace. He also mentioned that a criticism usually advanced against specific learning situations is that they are restrictive, with learning being bound to that setting. This claim is advanced against the learning in formal settings, like schools or colleges-that transfer from that type of setting is limited and configured by the context of that setting.

However if key skills are organisation specific it raises the question of their transferability and whether they can or should be taught in schools. These are the issues are discussed further.

#### 4.2.3 The transferability of key skills

Transferability is being used as the application of key skills across different domains or variety of social, and in particular employment situations (Bridges, 1993).

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<sup>i</sup> Billett (1992, 1994) through using empirical data proposed an approach to vocational skill development which emphasises the authenticity of learning experience. Authenticity is defined in terms of a socio-cultural construction of vocational knowledge. He is argued that particular significance is afforded to the soci-cultural contribution to problem solving and the transfer of learning. Also it has been suggested that learning situated in authentic setting has the potential to provide rich experiences. Finally he proposed that workplace learning should be considered as a viable option for skill development.

Hyland. *et al* (1998) have pointed out that there is no empirical evidence which supports "*independent or generalisability*" of core/key skills. They believe that if transferability is taken to mean the existence of "*generally applicable skills*" which have "*utility in a wide range of settings*", then claims about transferability are almost certainly indefensible. Learning and problem solving cannot be separated from the cues, tools, and people in an individual's environment.

However Bridges (1993) has an answer to this problem. According to him the term "transferability" of skills tends to be preferred when people are talking about the application of skills across different social contexts. For instance engineers teach approaches to problem solving in preparation for a whole range of circumstances. He argues there is an important distinction to be made at the heart of the debate:

*transferable core skills*- where what is supposed is that there are skills which can be deployed with little or no adaptation in a variety of social settings. Word processing might arguably be held to involve the same skills whether you were doing it in a university center, or office pool or as a professional writer at home. By contrast, perhaps negotiation skills might be heavily context dependent, relying on all sorts of sensitivity, responsiveness to and adaptation to relations between you and your partner, your class of students, your employer or your bank (p.50).

However, crucially, he contrasts transferable core skills with transferring skills:

*transferring skills*- which consist of whatever is involved in that kind of adaptation. These are as it were the meta-skills, the second order skills, which enable one to select, adapt, adjust and apply one's other skills to different situations, across different social contexts and perhaps similarly across different cognitive domains, like learning the computer (p.50).

Arguably, it is teaching transferring skills that is the key to how key skills can be adapted across organisations. This distinction enables us to argue that there is a difference between organisation specific and generic skills. The point here is that generic key skills may be taught by keying in students to the issues, questions and techniques involved in exercising key skills in specific context. It is a way of generating a set of expectations in a students about how they will need to adapt to specific workplaces. In this sense generic skills will be one aspect of Bridges's notion of transferring skills. In turn these ideas raise the possibility that key skills can be taught outside the specific context of the organisation.

#### 4.3 The teaching and learning of key skills

The third problem with key skills then is whether they can be taught outside specific organisations, and if so, how schools can develop key skills among students. However, there is a further complicating dimension to this issue in that these skills are closely related to personality or character. For example, the key skills that will be the focus of this study relate to communication, teamwork, problem solving and information technology. Of these the first two, and possibly the third have a direct bearing on personality. So there are questions about whether these skills can be taught, because an individuals' character may or may not change in a learning situation if so, how can key skills be taught and evaluated most effectively?

It will be evident that many employers do believe key skills can be improved through training and development. Hence considerable budgets are allocated for this purpose.

However, while there is some disagreement, the research of Jonathan (1987) does tend to support this view. Dench, *et al.*, (1988) have argued that if individuals are receptive they will be capable of progressing to varying extents, although this may well depend on family background and early socialisation. A stronger view is taken in the research of Stasz, *et al.* (1990, 1995), Stone, *et al.* (1990); and Cotton, (1993-1994) .

The important issue is that while there is agreement about the teachability of key skills, under what conditions is this achievable? What kind of theoretical approaches are able to describe a sound framework for delivering key skills and how can we improve the effectiveness of teaching key skills? There are two groups of commentators who have addressed learning and teaching of key skills. One side, explicitly focuses on the value of cognitive apprenticeship-situated learning, (Vygotesky, 1978; Brown *et al.*, 1989; Collins, *et al.*, 1989; Resnick, 1989; Farnham-Diggory, 1994;). On the other side, there are commentators such as Trower (1984), Cotton, *et al.* (1993-94), and Stasz, *et al.* (1990, 1995) who acknowledge that key skills are organisation specific but that their environments can be situated in schools to prepare students in learning key skills.

In explaining situated cognition, Brown *et al.* (1989) compared concepts to tools. As with tools, concepts can be fully understood only through use. As it is possible to acquire a new tool but not be able to use it, so it is possible that a learner will acquire a verbal definition of a concept, rule, routine, or algorithm yet not be able to apply it.

Situated-cognition theorists describe this acquired but unusable knowledge as inert, whereas well-developed and useful knowledge is robust.

Proponents of cognitive apprenticeship (Resnick, 1989; Farnham-Diggory, 1994) argue that people acquire many skills in real-life contexts, and they refine these skills by applying them in new situations. Therefore, learners should be paired with a more experienced learner or a mentor as they begin to learn a new skill or concept (Brown, *et al.*, 1989; Collins, *et al.*, 1989; Farnham-Diggory, 1992). As the novice student begins to construct an understanding of the new skill or concept through this cognitive apprenticeship, the more experienced learner provides the assistance, or scaffolding, needed for mastery.

While learners are engaged in cognitive apprenticeships, they necessarily undergo a process of enculturation as part of the natural learning process (Brown, *et al.*, 1989). In other words, they adopt the behaviours and belief systems of members of the culture with which they interact. For example, as a learner begins a new job, joins a new social group, or moves into a new neighbourhood, the learner gradually begins to exhibit culturally appropriate behaviour, jargon, and mannerisms and to act in accordance with cultural norms. School itself is a culture that influences the learning that takes place within its realm (Brown *et al.*, 1989; Farnham-Diggory, 1992). Thus, students learning maths or foreign language skills are not receiving exposure to the authentic cultures in which those skills are used, but rather are exposed to those cultures as they are interpreted in the school context. Consequently, learning

that typically occurs in school is different from learning that occurs in authentic situations (Rogoff and Lave, 1984; Resnick, 1989). In response to these discrepancies in school culture and the cultures of experts, situated-cognition theorists propose that cognitive apprenticeships must comprise authentic activity. Authentic activities are those "coherent, meaningful, and purposeful activities" (Brown *et al.*, 1989) that define the more ordinary practices of a culture. Through authentic activity, students become familiar with the uses of a body of knowledge as it is used within a particular culture (Brown *et al.*, 1989; Collins *et al.*, 1989; Farnham-Diggory, 1992). Accordingly Lave, 1988 and Lave and Wenger, 1991 claim that the implications for learning theory of research conducted from this perspective have been articulated in terms of a rejection of 'information transfer' models, which isolate knowledge from practice, and the development of a 'social construction' perspective on learning as a process of 'legitimate peripheral participation' - in which learners do not acquire 'objective' individual knowledge but, rather, learn to function in 'communities-of-practice' through participation in the development of (often non-explicit) experiential knowledge framed in a communal context.

What is so far obvious is that in teaching key skills one should take into account the real situation together with full co-operation and activity of the learner. Are there any other conditions which might be useful?



In school settings, employability skills are best learnt when classrooms replicate key features of real work settings and student tasks approximate those performed by workers in those settings. (Jamieson. *et al.*, 1988; Berryman 1990, 1991; Stasz, *et al.*, 1990, 1995; Cotton, 1993-94). These findings validate the view that in teaching vocation-specific skills, active, hands-on learning in actual or simulated work environments is far more effective than isolated, decontextualized learning. Jamieson. *et al.*, (1988) in responding to the question of the effectiveness of work simulations as a vehicles for student learning, argues work simulations might be effective in three ways; a) work simulations might be a good deal better at teaching students the principles and concepts underlying the facts; b) simulations producing better learning gains in the affective domain than do most other techniques; c) many experienced teachers are in agreement with simulations. Berryman (1990) notes that too often knowledge and skills are taught in settings that do not reproduce the settings in which the work must be performed. This teaching out of context impedes the transfer of training to settings outside the training context. Gregson and Bettis (1991) focusing on affective skill development, found that,

" in successful classes, instructors attempted to teach work values and attitudes in a context similar to what students would experience in the world of work" ( p. 19)".

Junge, Daniels. and Karmos (1984) make a similar point regarding the acquisition of work-applicable basic skills:

‘Teaching is more than telling, and learning is more than acquiring and demonstrating mastery of facts. To ensure the transfer of basic skills

into the workplace, teachers must engage students as active participants in the learning process. Prospective employers will expect them to be active participants in the workplace (p. 145). '

The conclusions drawn by Stasz, *et al.*, (1995) provide some clues as to why active and "situated" learning proves most effective:

"It appears that generic skills and work-related attitudes can best be taught in classrooms and programs that blur the traditional distinctions between learning in school and out of school.... This approach requires teachers to...create classrooms where students can acquire and apply knowledge and skills to real-world problems, learn to work with others in a community of learner-practitioners, and develop intrinsic motivation for learning and working (p. 56). "

Stasz, *et al.* (1995) conducted two studies on the teaching and learning of generic skills and work-related attitudes in academic as well as vocational environments and examined whether effective instruction in each setting is similar. The first study focused on the development of an approach to studying the instruction of generic skills, particularly complex reasoning skills. And the second application was to the approach of teaching generic skills and attitudes in both academic and vocational classrooms. They developed a model (table 4-1) which contain four major themes. Within each theme, the model specifies sub-themes that emerged from the data. This study is important because it does attempt to come to grips with linking school based training to that of the work situation. It is also important because it is based on a

very sophisticated piece of research on the question of whether key skills are organisationally or occupationally specific.

Instructional goals	Classroom design	Teaching techniques	School context
Complex reasoning skills	Situated learning	Modelling	Access to knowledge (time, material, staff, facilities,)
Work-related attitudes	Culture of expert	Coaching	Press for achievement
Co-operative skills	Practice	Scaffolding	Professional teaching conditions
Domain-specific knowledge skills	Motivation	Articulation	
	Co-operation	Reflection	
	Teacher roles	Exploration	

Table 4-1: Components of an Instructional Model for teaching Generic skills and Work related attitudes (Stasz, *et al.* 1995: xvi)

As table 4.1 shows the instructional goals included complex reasoning skills, co-operative skills, domain specific skills and knowledge and as well as work related attitudes. For instance in the English class, writing was taught as a tool for thinking. But in other classes such as electronics, manufacturing and design, teachers focused on instilling positive work-related attitudes, and co-operative skills. All teachers followed their classroom instructional goals by situated learning. They provided a situation for students involved in practice and project work such as real tasks performed by adult workers rather than exercises. Teachers participated in the process of practice and did little lecturing. Teachers relied heavily on modelling,

coaching, and scaffolding, to demonstrate how an expert practitioner carried out a task.

Stasz, *et al* concluded that although they separated teaching of generic skills in different domains but they are linked in practice and must be considered in an integrated fashion in order to design classrooms that work. Instructional goals, classroom design, teaching technique, and school context interact in ways that are suggested in figure 4-1.

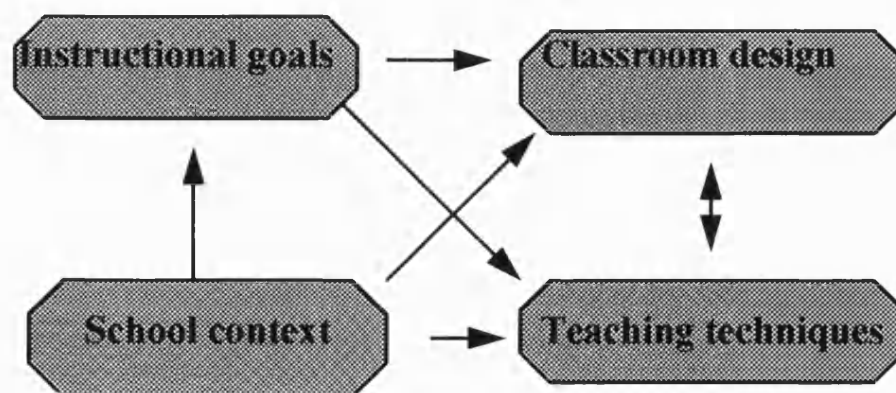


Figure 4-1: Lines of influence among the components of instructional generic skills (Stasz *et al* 1995:XVI)

The main implications of this study for generic skills are that generic skills can be taught in academic and vocational classrooms. In doing so classroom instruction should be designed around project work that situates learning in a particular context and provide opportunities for authentic practice. Finally in teaching key skills it is

important to consider that schools should providing what is being proposed from a situated or a socio-cultural perspective. As Billett (1994) argued an authentic socio-cultural learning experience is needed to drive the learner into activities that are socio-culturally meaningful, generative of proceduralisation and indexed richly to secure recall and application.

#### 4.4 Conclusion

In this chapter we have asked a series of questions concerning the nature and teachability of key skills. It was argued that key skills can form a valid part of the productive process in " post-Fordist " organisations. However, this then raised the question of whether these key skills are occupationally or professionally specific. Here it was argued that key skills are specific to particular social domains. The consequence of this argument is that if they are professionally or organisationally specific then how can they be transferred or taught? Here it was suggested that there are strategies that can be employed in transferring key skills, in line with Bridges's distinction between transferable and transferring skills. Preparatory work can be done in schools or other educational institutions but fluency can only be achieved through practice in specific contexts.

This conclusion does suggest that schools have a role to play in developing key skills. Nevertheless a high degree of indeterminacy remains because the " generic"

elements which are taught in schools still have to be applied in a range of different contexts. Here key skills will be defined and described in quite different words. The key issues then in terms of the school interface with industry are:

1. Is there a clear understanding of the relationship between the role of schools in developing the more generic or preparatory understandings and the role of organisations in developing organisation specific key skills?
2. Do schools teach the key skills needed in leading edge companies?
3. To what extent do organisations understand the links between teaching key skills and organisational cultures? Do they differentiate between key skills for different professions or crafts within an organisation?
4. How well do they teach key skills for their organisation?

The above questions have potential to provide information about how schools and organisations actually teach key skills and how those key skills fit into the organisation of work.

## 5 Research Methodology

### 5.1 Research Design

In order to investigate the links between schools and industry a case study method has been adopted. Case studies can be used in various ways, particularly in sociological studies, but increasingly, in education, and organisational research. Adelman *et al.* (1980), Yin (1994), Ball (1994), Kogan (1994), Stake (1995), and others, who have wide experience in this methodology, have developed robust procedures. Case study researchers typically observe the characteristics of an individual unit, a group of teachers, a group of students, a group of managers and head teachers, an organisation or a community. The purpose of such observation is to probe deeply and to analyse intensively the multifarious phenomena that constitute the life study (Bogdan. and Sari Knopp, 1992). Case studies are designed to bring out details from the viewpoint of the participants by using multiple sources of data. Yin (1994) has distinguished between three types of case study research: "exploratory" which investigates a vague problem or new issue, "descriptive" which seeks to define accurately a situation or issue and "explanatory" which explains the causality between different observations.

He states that

"...case studies are the preferred strategy when "how" or " why" questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context (p.1)."

Generally the case study has advantages which make it attractive to educational researchers (Adelman *et al.*, 1980): a) case study data, paradoxically, is "strong in reality" but difficult to organise. In contrast, other research data is often "weak in reality" but susceptible to ready organisation, b) case studies may allow generalisations either about an instance or from an instance to a class, c) case studies recognise the complexity and embeddedness of social phenomena, d) by careful attention to social situations, case studies can represent and explain something of the discrepancies or conflicts between the viewpoints held by participants, e) case studies are "a step to action" and they began in a world of action and contribute to it. Accordingly Hakim (1992) believes that the field work for case studies may incorporate the analysis of administrative records and other documents, depth interviews, larger scale structured surveys (either personal interview or postal surveys), participant and non-participant observation and the collection of virtually any type of evidence that is relevant and available.

The case study methodology has been subjected to scrutiny and criticism at various times. Hakim (1992) argues that the enormous variation in case study designs makes it difficult to summarise their key strengths and weaknesses; so much depends on the degree of fit between the questions to be addressed and the particular case, or cases, selected for study. The flexible character of the case study design makes for very diverse types of study. One of the main difficulties in case study research concerns access to data collection and an understanding of the underlying culture of those involved in the case. Ball (1994) has pointed out the problem of "power" and



"sharing culture" in case studies when the researcher attempts to interview those with power in educational situations including LEA managers, headteachers and school governors. Here issues of the natures of access, culture and power come together. He argues that researchers during the interview with powerful people, will stand in a position between "knowledgeability" and "naivety". That is, between being seen as understanding the field and its main issues and still having something to learn. Adding that the mode of interviewing and the form of question and answering in any encounter is related to the professional and work "culture" of the respondents.

Hakim (1992) notes that the difficulties of case studies lie in the researcher's skills, experience, and alertness in designing, analysing and interpreting. She adds that most researchers tend to specialise in particular types of work, whereas case studies tend to demand a wider range of skills, interviewing, the analysis and interpretation of information held in documents and records, the design and analysis of structured surveys, extended periods of observation as well as the usual literature surveys and drafting skills for research reports. Another practical problem is that the analysis and presentation of case study data requires more skill than reports based on single types of evidence. Two common errors are to present an indigestible mass of detailed evidence in the report, or to report on the researcher's conclusion, instead of presenting carefully selected robust and central items of data in combination with the various questions and issues addressed by the study. Goode and Hatt (1952) asserted that the basic danger in case studies is the response of the researcher. The researcher comes to feel a false sense of certainty about his own conclusions. Finally the issue

of generalisation has appeared in the literature with regularity. It is a frequent criticism of case study research that the results are not widely applicable (Tellis, 1997).

In the case of this research the functions of case studies identified by Yin are all used: the explorative, descriptive and explanative ways of collecting, analysing and interpreting results. The process was exploratory because efforts were made to understand in depth, the links between education and economy with respect to the complex cultural phenomena of key skills from different perspectives. The process was descriptive because the research addressed the meaning of key skills from the point of view of managers, apprentices, trainers and also schools, LEA representative and teachers. Moreover the research was explanatory because it sought to adjudge between rival theories in explaining what was observed.

In qualitative research the quality of data is determined by a) selection of resources for the information- books, students, teachers; b) the procedures used to obtain information; c) and the methods used to transform the information into data that can be used to study the problem.

Yin (1994) identified six primary sources of evidence for case study research. The use of each of these might require different skills from the researcher. Not all sources are essential in every case study, but the importance of multiple sources of data to the reliability of the study is well-established (Stake, 1995; Yin, 1994). The six sources identified by Yin (1994) are: documentation, archival records, interviews, direct

observation, participant observation, and physical artifacts. No single source has a complete advantage over the others; rather, they might be complementary and could be used in tandem. Thus a case study should use as many sources as are relevant to the study. Table 5.1 indicates the strengths and weaknesses of each type:

source of Evidence	Strengths	Weaknesses
Documentation	<ul style="list-style-type: none"> <li>• stable - repeated review</li> <li>• unobtrusive - exist prior to case study</li> <li>• exact - names etc.</li> <li>• broad coverage - extended time span</li> </ul>	<ul style="list-style-type: none"> <li>• retrievability - difficult</li> <li>• biased selectivity</li> <li>• reporting bias - reflects author bias</li> <li>• access - may be blocked</li> </ul>
Archival Records	<ul style="list-style-type: none"> <li>• Same as above</li> <li>• precise and quantitative</li> </ul>	<ul style="list-style-type: none"> <li>• Same as above</li> <li>• privacy might inhibit access</li> </ul>
Interview	<ul style="list-style-type: none"> <li>• targeted - focuses on case study topic</li> <li>• insightful - provides perceived causal</li> <li>• inferences</li> </ul>	<ul style="list-style-type: none"> <li>• bias due to poor questions</li> <li>• response bias</li> <li>• incomplete recollection</li> <li>• reflexivity-interviewee expresses what interviewer wants to hear</li> </ul>
Direct Observation	<ul style="list-style-type: none"> <li>• reality - covers events in real time</li> <li>• contextual - covers event context</li> </ul>	<ul style="list-style-type: none"> <li>• time-consuming</li> <li>• selectivity - might miss facts</li> <li>• reflexivity - observer's presence might cause change</li> <li>• cost - observers need time</li> </ul>
Participant Observation	<ul style="list-style-type: none"> <li>• Same as above</li> <li>• insightful into interpersonal behaviour</li> </ul>	<ul style="list-style-type: none"> <li>• Same as above</li> <li>• bias due to investigator's actions</li> </ul>
Physical Artifacts	<ul style="list-style-type: none"> <li>• insightful into cultural features</li> <li>• insightful into technical operations</li> </ul>	<ul style="list-style-type: none"> <li>• selectivity</li> <li>• availability</li> </ul>

Table 5-1: The strengths and weaknesses of sources of data collection (Yin, 1994: 80).

This case study relied on semi-structured interviews, open discussions with interviewees, shopfloor direct observations and documentary analysis. The interview

is an adaptable means and essential way of collecting in-depth information and understanding of the social phenomena. According to Cohen, *et al* (1994) the interview may serve three purposes; a) as a means of gathering data from people ; b) as a way of testing, grounding and explaining hypothesis or new relations, and c) to gather in-depth understanding.

Individual and group interviews have respective advantages and disadvantages as a means of collecting data in social science research. The individual interview is an appropriate method when it is necessary to understand the views and perceptions of the interviewee about a particular matter or situation. Also the step by step logic of a situation may not be clear. This is particularly the case, as Ball (1994) suggests in interviewing the powerful who may have their own agenda which they wish to protect. Here the interviewer has to distinguish between what he/she wants to find out and what the interviewee wants them to find out.

Group interviews can provide another level of data gathering or a perspective on the research problem not available through individual interviews (Fontana and Frey 1994). The advantages of group interviews are related to their potential for discussions to develop, and the potential to yield a wide range of responses. Also group interviews stimulate participants to state feelings, perceptions and beliefs that they would not express if interviewed individually (Cohen & Manion, 1994; Gall, *et al*, 1996). Varied view points are obtained when qualified individuals with common or divergent backgrounds are brought together to explore a problem, to provide

information about a subject in a case study, or to evaluate the merits of a proposition.(Dalen *et al.*,1979). The group interview also has the advantages of being inexpensive, data rich, flexible, stimulating to respondents, recall aiding, and cumulative and elaborative over and above individual responses (Fontana and Frey, 1994). The disadvantages of group interviews are that they sometimes descend into allowing personal matters to emerge. The emerging group culture may interfere with individual expression, one person may dominate the group or the group may also follow individuals.

One of the fundamental problems in the case study method concerns using multiple sources of data validity and reliability. Validity and reliability are criteria by which judgements about the quality of investigation can be made. Distinctions between reliability and validity of qualitative data are not as clear-cut as they are for quantitative data, although the concepts are applicable.

Validity refers to the extent to which a measurement process measures what you want it to measure. A range of procedures for enhancing validity are face validity, content validity, concurrent validity, construct validity, and predictive validity (Borg, *et al.*,1989). Questions about validity historically arose in the context of experimental research and the above validity concepts were developed in this context. The emergence of non-experimental, so-called "qualitative" methods poses new questions (LeCompte *et al.*, 1992). With respect to validity different commentators argued that to get away from biases as much as possible, and get a better picture of what is

involved requires triangulation.(Gummesson, 1991; Cohen & Manion,1994; 1994; Yin, 1994;Tellis, 1997). Triangulation has been defined as using two or more methods of data collection in the study or it can be achieved by getting more viewpoints on the same subject. Combined levels of triangulation uses three methods of analysing data, namely; individual level, group level and collective (organisational, cultural or society ) level.

Other commentators have suggested a number of measures to achieve validity such as: cumulative validation (the findings are supported by other studies), communicative validation (by collecting additional data from the field), argumentative validation (approaching conclusions through a process of backward and forward data collection and analysis), ecological validation (collect data in a natural environment from the subjects). (Becker, 1989; Drew *et al.*, 1996; Lamnek, 1988; Terhardt, 1981; quoted from Sarantakos, 1998).

Reliability typically means consistency of results using the same methodology over time ( Borg, *et al.* 1989). Qualitative researchers strive for rigour but their methods vary from those employed by quantitative researchers. Bogumil and Immerfall (1985) argued that instead of talking about reliability, control of variables or subjectivity in social research, one should rather consider looking at options such as the following: coherence- the extent to which methods meet research goals, openness - the degree to which otherwise suitable methods are allowed to be used; discipline- the extent to

which researchers are allowed to discuss the researched data and interpret them together and evaluate the consequences of such findings.

Lincoln and Guba (1986) have suggested alternative criteria to those of validity, reliability, generalisability and objectivity: a) in qualitative research, researchers do not need to demonstrate validity but rather methodological excellence, by doing research in a professional, accurate and systematic manner; b) instead of generalisability, they suggest transferability. This means that the researcher should state how research was undertaken and explain methods, instruments and parameters, leaving it up to those who are interested in the finding to decide whether they can be generalised or not c) in contrast to reliability in quantitative research, in qualitative research, the research is responsible for describing the changes that occur in the setting and d) the researcher should document the procedures for checking and rechecking the data throughout the study-confirmability (Hammersley *et al.*, 1994).

## 5.2 The key methodological issues in this study

Researching the relationships between schools and paid work requires considering their culture. This is especially so in study of complex issue like key skills. It is critical for the researcher to be aware of the cultural context of interviewees. At the start of my meeting with schools and industry representatives I did not have a clear understanding of how they might understand the nature and meaning of key skills. As the research progressed I became aware about the extent to which teachers and managers have conflicting perceptions of key skills. Through the interviews I aimed

to ask interviewees and find out from group meetings about their involvement in key skills, about their motives, about their contributions to their construction and understanding about the difficulties involved.

During the process of the study, efforts have been made to approximate to validity and reliability criteria. As in most research it is methodologically unsound to rely upon only one source of information when collecting data I therefore made a great effort to interview as many of the teachers, managers, and apprentices as I could.

A triangulated methodology was used to collect different types of data that could be used as a crosscheck. The aim of the triangulated approach was to draw on the particular and different strengths and various data collection methods. Individual and groups interviews provided me with in-depth information. I became aware that managers of Rover, LEA, teachers and headteachers all have their own agendas. As the researcher I was outside the Rover culture and in relation to the Swindon Education Business Partnership, in Ball's terms, I may have been considered naïve. At times this may have been an advantage and other times a disadvantage. It was an advantage because interviewees could easily talk about key skills, their potential and weaknesses. But in some cases I may have been at a disadvantage because interviewees knew I was not familiar with the reality of key skills in practice and shopfloor or school cultures, thus they could produce a biased picture of reality according to their own agenda. Attending meetings and getting to know the central



issues during the process of conducting research, reduced the distance between myself as researcher and interviewees.

According to Donald Light (1983) observation enables one to discover the interrelationships between elements of the whole phenomena, including in the case of the influence of peer culture among those being trained, and the implicit messages which the organisation gives about itself in the training process. Observation of teamwork on the shopfloor was useful because, a) made me familiar with the processes of teamwork in shopfloor and each zone, b) provided chances to directly talk to the shopfloor workers about the importance and applicability of key skills and, c) created the opportunity for me to make a comparison between what Rover managers, trainers, apprentices and ex-apprentices said about the role of key skills and what actually they did in practice. Documents gave me the opportunity to access the SEBPs history and also Rover's strategy in terms of the organisation of work and training and skills development. Participation meetings gave me opportunities to have access to group processes and enabled me to be aware of the different points of view of teachers, LEA managers and industry representatives.

The switch from key skills meetings to Rover and then from Rover to schools, teachers and headteachers provided me with some positive outcomes. I was able to understand the views of teachers and managers and it enabled me to revise research questions and concentrate on crucial issues. Through conducting interviews with top,

middle and shopfloor managers, apprentices and shopfloor workers, site visits and examines documents a much better fix on reality was possible.

A good research takes time to develop. Collecting the data through the course of nearly two years and in multiple sites including schools, the Rover training school, the shopfloor, and offices enabled me to collect, analysis, and interpret the findings and develop a better understanding of issues.

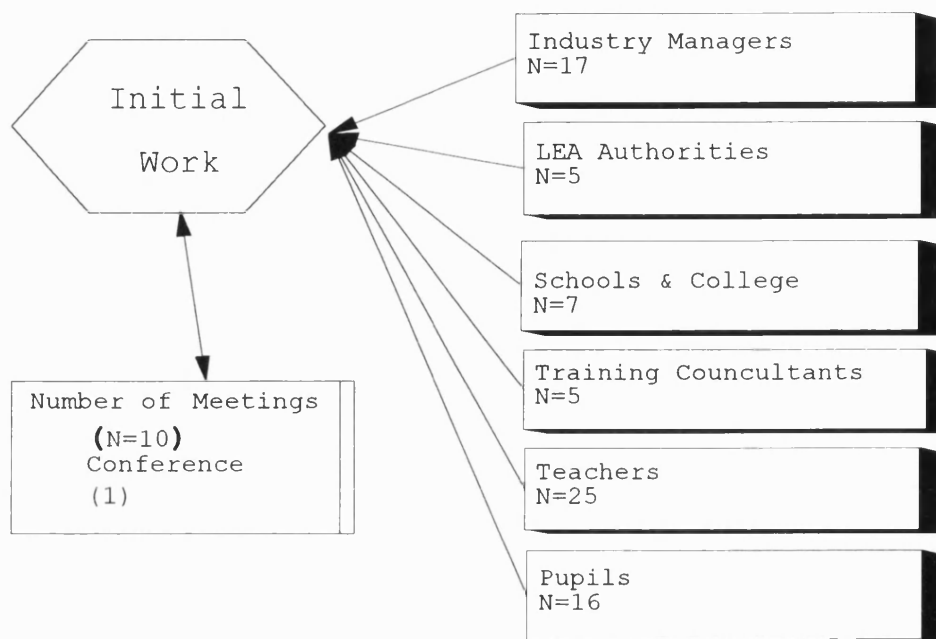
To reduce the bias of the researcher as much as possible, interviews and meeting discussions were recorded. At the end of each meeting or interview notes were taken. In the case of SEBP, most people in meetings were representatives of their company or school, who had reliable information about their organisations skills needs. Consequently, it is hoped that the issues relating to validity and reliability in this study have been addressed.

### 5.3 The methods employed in this study

In addressing the research questions two main phases were followed. Firstly, study of Rover Body and Pressing plant as described in the previous chapters. Secondly, the study of an initiative in Swindon between the Rover Group and other companies- Allied Dunbar , Burma Castrol, W.H. Smith and the local education system. In the beginning of the field study, the researcher asked the question: how do I access to processes within these companies?

The starting point was the Swindon Education Business Partnership (SEBP) meetings about the Key Skills Initiative. The partnership between companies and the education sector in Swindon has been established since the early 90s. The first meeting was with the Rover Group Educational Partnership Manager. In this meeting we talked about the purposes of the research and its relation to the partnership of the initiative with which they had already been involved in Swindon. Also under discussion was the Rover Group - Action plans for Key Skills. She pointed out that there was a view shared by the managers in the partnership that schools were failing to provide some of the key skills required by industry and, as a result, it was decided to initiate a programme to introduce the key skills of: communication, problem solving, teamwork and IT skills into schools. After that meeting I was introduced to the committee of the Swindon partnership and group members who accepted that I could evaluate the key skills programme. Attendance at meetings provided a chance to talk with different managers, teachers, headteachers, consultants, Education Business Liaison managers and pupils. As a consequence of participation in the meetings, the researcher gained first hand information on the issue. In each meeting on average 6-10 people came together with many different ideas and concerns. The company's managers from the Rover Group, Allied Dunbar, WH. Smith, and Burma Castrol, talked about their company strategy and about the key skills. There was also a conference on key skills which provided a better chance to find out what different stakeholders thought about the key skills and partnership initiative. ( See Appendix 5.1: Timetable of the SEBP meetings )

In this field study the data were collected from different stakeholders (figure 5.1 shows number of people) through meetings, interviews, discussion group, note taking, and document analysis.



**Figure 5-1:** Sample of the field study (Case) in Swindon Education Business Partnership.

The second phase of research focused on the Rover Body and Pressing Car Manufacturer in Swindon plant. Although access to Rover took several months to gain, the resulting reasonably open discussions with the managers and apprentices provided sufficient insight into Rover's situation in terms of systems of work and skill formation particularly the role of key skills in selection, recruitment and shopfloor work.

Having decided that the target population in this part of the car industry was people who work in Rover Body and Pressing (RBP) in Swindon plant, efforts were undertaken to choose key informants who had a sound experience regarding the process of organisational change. Therefore information was collected from three main groups of people. First were the top managers, the Managing Director, and the Personnel Manager who have responsibility for management and policy making to human resources. The top managers were selected as the most knowledgeable about the organisation.

A second group includes the Skill Development and Training and Rover Education Partnership Centre Managers whose remit included policy making and implementation of those policies. Shopfloor managers, ex-apprentices, apprentices and trainers of the Rover Training School were the third group who were engaged in shopfloor work and the process of skill development. Rover has three apprentice groups: Business Technician, Engineering Apprenticeship, and Technician Engineers. Apprentices are recruited from external labour markets and receive on-the job training at Rover through the Rover Training Centre and off-the-job by day release in College ( See table 5.2).

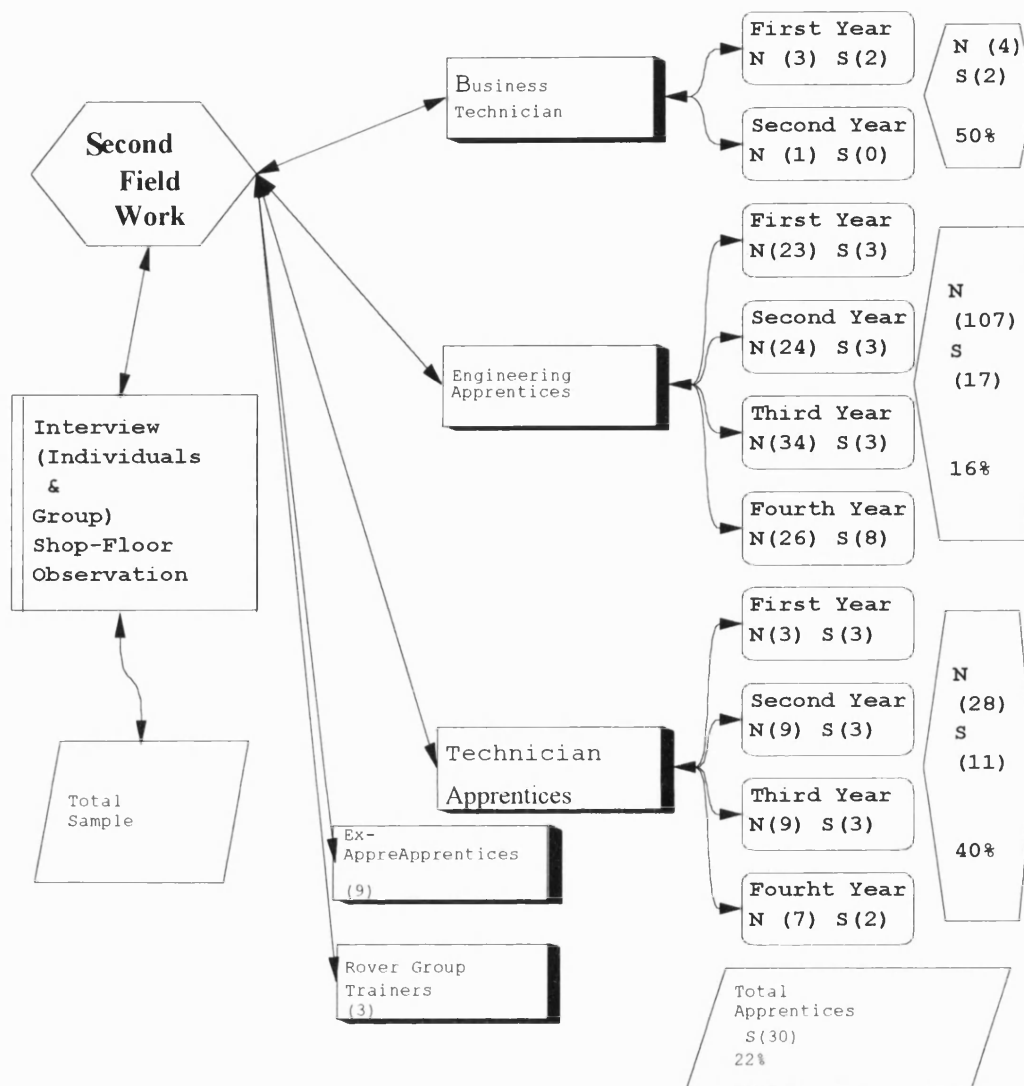
Scheme Description	1994	1995	1996	1997	Total
1. Business Technician	-	-	1	3	4
2. Engineering Apprentice	26	34	24	23	107
3. Technician Apprentice	7	9	9	3	28
Total	33	43	34	44	139

**Table** : Statistics of the Rover Group Apprentices who are in the training school

The sample of apprentices who were interviewed was chosen by stratified random sampling within each year of the four years of the apprenticeship<sup>i</sup> (See appendix 5.2).

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<sup>i</sup> In quoting the interviewees' points of view, they are numbered in terms of the sample from each apprenticeship scheme.(see appendix 5.2 for more information).



**Figure 5-2:** Sample of the Second field study in Swindon

A semi-structured interview technique (Individual and Group Interviews) was utilised in nearly all interviews with these personnel. This method guaranteed collecting consistent information from the various cases without foreclosing the exploration of issues not anticipated. The interview questions covered a range of issues relating to

change in the organisation of work, the relationship between education and the economy, the role of schools and GCSE, in preparing young people for the labour market, training in key skills, and the role of key skills at shop floor level. (Appendix 5.3 , 5.4, Interview questions). Interviews with managers lasted for up to one hour, apprentices and trainers between half and one hour. Each interview was tape-recorded and then transcribed. By reading carefully, the transcribed interviews, key elements for analysis were identified. Quotations relating to a specific subject were compared and contrasted across all interviews.

Apprentices and ex-apprentice interviews started with an individual interview with one apprentice from each scheme in same year. These individual interviews were fruitful in terms of information produced in order to get enough understanding regarding the situation of training schemes and the apprentice situation. This stage also provided information to evaluate the questions and to add new ones. In order to find out the apprentice's point of view, and create a live discussion amongst them, group interviews, - in-groups of two, three and four apprentices were organised. Assurances of the confidentiality of the interview were provided.

Due to the complex nature of the issues a process of forward and backward data collection was adopted. To be more specific, attending meetings of SEBP regarding the key skills initiative raised different questions and arguments, which needed to be considered and described by different groups such as teachers, head teachers, industrial managers and students. As far as possible the researcher made efforts to



follow and investigate questions from different point of views. Nevertheless, on the one hand SEBP meetings and discussion, and on the other hand the interviews and observations of shopfloor workers in Rover Body and Pressing plant produced a fruitful opportunity to compare the ideas of different groups and find out the nature and source of conflict between schools and industry.

Documentary analysis was also used as a source of information to find out more about the history and programmes of SEBP and the company strategy with particular emphasis upon organisational change, skills and links with local schools and colleges. In the case of Rover Body and Pressing plant background information concerning the company's strategy, recruitment, training and human resource development practices was collected. The information covered :

- background questions on the plant, its history, products and markets;
- the production technology; work organisation and related innovations;
- human resource policies;
- current and projected skill requirements for the jobs, educational prerequisites and related hiring criteria;
- training policies of the firms, problems and conflicts encountered with implementation of training.

From the LEA documentary information was collected, including; agendas, minutes of meetings, minutes of key skills programmes, report of previous key skills evaluation in Swindon, proposal of key skills initiative, proposal of common language. In all, data and the necessary information were collected based upon the SEBP meetings, interviews with teachers, headteachers, pupils, LEA authorities, other consultants and Rover Body and Pressing site visit and interview. (See figure 5.3). The data collected from various subjects and sources focused on the process of change in organisation, the relationship between the schooling system and paid work, and particularly the key skills debate. Predictably the data appeared contradictory. This is due to the study focusing on the relationship between industry and schools, because a particular culture and set of social relations dominate each one.

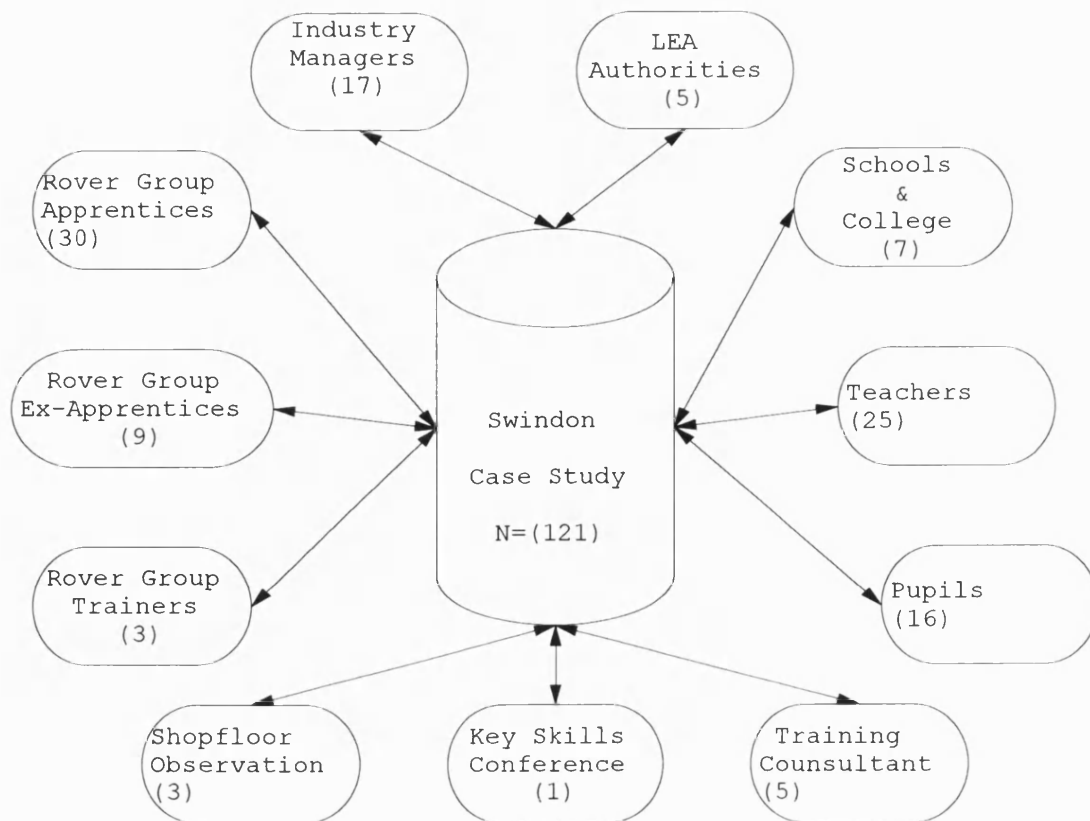


Figure 5-3: Number of interviews and observations involved in the case study

The literature review has already indicated that there was a debate among schools and industry in terms of the nature and application of education, learning and skills. This problematic situation in terms of variations of perspectives created processes within the data which needed explanation. (See figure 5.4).

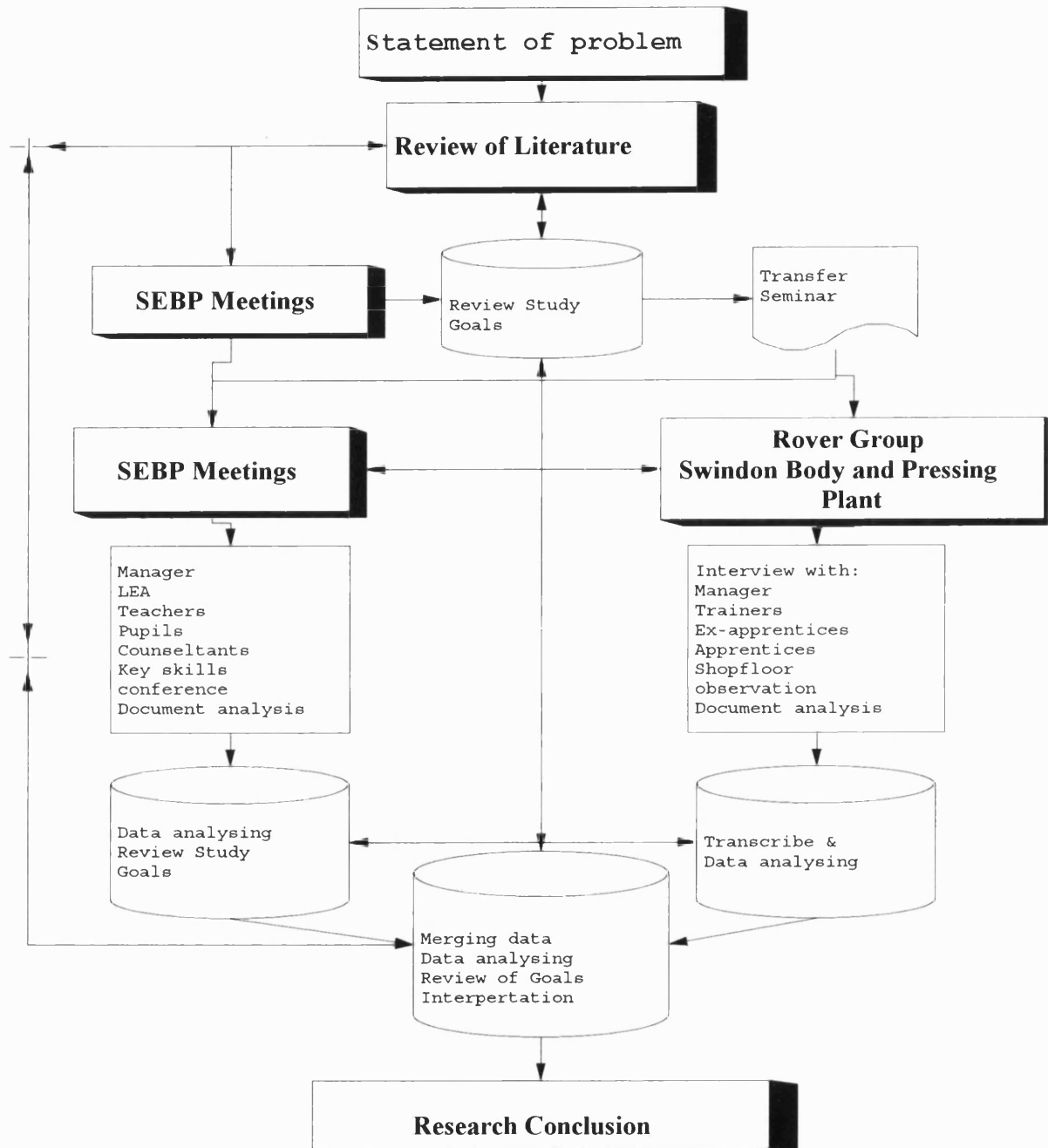


Figure 5-4: Structure of the field study Rover Body and Pressing Plant and Swindon Education Business Partnership Initiative

As the diagram (5.4) shows after the initial statement of the problem, the relevant theories were reviewed. This review produced a set of research questions which were refined by attending the SEBP meetings. Through this process the first framework of research goals was established. The transfer seminar in the Education Department of the University was a good opportunity to evaluate and reorganise the framework and goals of the study. In fact the transfer seminar provided useful insights together with the review of literature in examining the relationship between education and economy in neo and post-Fordist organisations in industrial manufacturing. During the process of data collection, because of the nature of the case study the questions were analysed based upon interviews, participation in meetings, observation of shop floor, document analysis, and by comparing people views and arguments.

## **6 Is Rover a Post-Fordist organisation?**

### **6.1 Introduction**

It is argued that three business strategies are dominant in the international automobile industry; Fordist (mass production), neo-Fordist and post-Fordist. Post-Fordist production is the basic capability underlying the competitive advantage of Japanese auto companies in the 1970s and 1980s. It has been increasingly evident that the post-Fordist organisation of work is more flexible and more capable of adding value and raising productivity. The success of the Japanese car industry in using total quality management has persuaded rival companies in the U.S.A and Europe to organise company's strategy towards this new system of production. Many commentators have argued that this transition is a significant movement toward creating commitment, empowering the workforce and creating more flexibility. Post-Fordism requires a flatter organisation to become more flexible and responsive to customer demand. Investment in workforce skills is a recognised way of providing people with the capability to work under the new concepts of total quality management - teamwork, quality control, JIT, etc. As the work of Kochan, *et al* (1997) shows the international automobile companies around the world are placed on a continuum which begins from the mass production -US owned companies, those countries which still using a combination of mass production and lean production, companies which have a rapid progress toward lean production- some Europe and

Korean firms, and finally at the end of continuum there are Japanese plants and Swedish plants which are already following post-Fordist systems of production.

However as has been discussed in the theory chapters in relation to the theories of neo and post-Fordist organisation, there are two related issues. Firstly the different ways of organising work and their effect on workers' autonomy, workers' participation, promotion, selection and recruitment and workers socialisation. Secondly the different types of organisation, consider differently the importance of training, skills development particularly key skills such as teamwork, communication and problem solving.

In this part of the study, according to our model of neo and post-Fordist organisation the position of the Rover Group Car Manufacturing is examined in relation to the recent changes that have taken place in Rover Group- Body and Pressing Plant in Swindon. This information has been collected based on interviews with the managers, apprentices and ex-apprentices, Rover school trainers, and observation of the shopfloor in the Swindon Body and Pressing plant, plus a review of Rover Group documents. This data will help us to determine the nature and impact of the new system of production on Rover and to assess the extent to which it is a post-Fordist organisation. The study mostly focuses on industrial relations from the following key interrelated important aspects.

- i. Technological change; using flexible technology such as CAD/CAM

- ii. The organisation of work; teamwork, job rotation, workers' autonomy, workers' participation, team assessment, team leaders, quality control, career path and promotion
- iii. Selection and recruitment processes
- iv. Skill formation, on-the job and off-the job training, key skills functions and, key skill utilisation perspectives.

It is assumed that a process of changing technology influences the organisation of work, and consequently, the system of skill development. In other words, according to the model developed in this research there is a relationship between technology, the system of work and skill development, so that new post-Fordist production systems require a different approach to skill formation than do Fordist or neo-Fordist mass-production systems. Industrial restructuring practices reflect on one hand, the political economy of the organisation and on the other hand processes of learning and doing under a contract between the employee and the organisation.

In the following the question of whether Rover is a post-Fordist organisation is addressed by focusing on use of technology, the organisation of work and promotion patterns. In the next two chapters we will address the human resource development strategy of Rover Group generally and particularly in the Swindon Body and Pressing plant in terms of selection and recruitment and process of skill formation, and key skills.



## 6.2 Background of the Rover Group Car Industry

The Rover Group is Britain's largest motor manufacturer. Rover Group is a major employer with, 39,000, people working for the company globally. A further 110, 000 people work within companies supplying Rover Group with production materials and services. Today, BMW and Rover together make up the seventh largest car manufacturer in Europe and the world's largest specialist car manufacturer. Since 1994 Rover has been owned by BMW, although Rover continues to operate as an independent company.

The Rover Group's link to BMW is the latest phase in a prolonged period of organisational change. Rover Group went through three challenging phases in the period 1877-1999. Between 1980 and 1994 Rover went through alliances with different companies including Honda, British Aerospace and BMW. Since 1980 in its struggle to survive in a global and highly competitive economy Rover has shifted its strategy toward rethinking its system of production. During this period Rover emphasised the process of developing apprenticeship, multi-skilling and introducing teamwork and key skills on the shopfloor. The Rover Group has announced a high commitment to quality, safety, high ethical standards and concern for its employees, customers and the environment. The Rover commitment and effort to develop more flexible and democratic production systems in Swindon is a response to political and union pressures and the need for more flexible production systems to meet increasingly variable market and product demands.

Austin Rover in 1988 was sold to British Aerospace for 185 million pounds. Rover Austin was renamed the Rover Group Limited in 1989 and 20% of its share was taken by Honda in exchange for acquisition of 20% of Rover Group. The joint venture between Rover and Honda, effectively lasted from 1989 to 1994. The Managing Director of Swindon plant commented that:

"First of all collaborating with Japanese companies and working a lot in Japan as a result of that, Japanese suppliers and so on, inevitably and rightly so we've got a massive amount of what I'd call process learning through working in Japan. I'm not sure so much in terms of specific technical learning, obviously we had our minds and eyes opened on technical content as well, but it feels like the major learning we got from the Japanese in the Honda area was about process of learning. I think that's the thing that Japan offers most to its industry, process learning, whether it be TQM, or , operating strategies, process thinking- I think that's mostly what Japan has offered to the rest of us, the Western world. With Honda we had real eyeball to eyeball learning and ear to ear on those subjects, which moved us significantly forward to process effectiveness in terms of cost management and lead time management, all those things."

This means that Japanese management strategies and techniques have influenced the organisation of work and processes of skill formation in the Swindon plant. The circumstances of the alliance between Rover and Honda, as well as the expectations and objectives of those who were charged with its success, emerged from their respective histories, corporate cultures and competitive positions.

According to Pilkington (1996) Rover's importance to Britain's industrial heartland and place as a major global business were recognised, and it was hoped that collaboration could invigorate the product design and production management capabilities of an ailing national flagship. Yet both Rover and Honda ultimately failed

to achieve their objectives, because of the organisational structures and corporate cultures prevailing within the companies at the time of the joint venture's formation. A harsh irony became apparent: Rover, entirely contrary to its strategic intentions, had become reliant on its partner.

The Japanese company's working methods caused numerous problems for the LongBridges management. While the British were accustomed to a preponderance of manual operations and to carrying safety stocks of materials, Honda's systems were highly automated and weren't controlled by stable, long-build cycles and manufacture in large batches (Pilkington, 1996). Ultimately, LongBridges adapted to the Honda way which gave a predictable and reliable production process of large batches of consistent products with the same qualities (Pilkington, 1996). But this achievement at Long Bridges hardly assisted Rover's new strategy of producing for the top end of each market sector, where the operation of consumer choice and the ability to produce largely to individual customer orders were vital. The company certainly gained in design capability and, as a result, its image with consumers was revitalised (Pilkington, 1996). Its ageing vehicles were replaced with modern and desirable products that were often compared by the motor press to established leaders in the field. However, the capacity of the company to absorb this capability soon led to the need to appraise the question of human resources.

In April 1992 Rover, in order to sustain international competition and to increase its production and performance, signed an important agreement with five recognised trade unions known as "the New Deal" (Taylor, 1994). As a result Rover has tried

to established a strategy to integrate its human resource systems with its production strategies and also enhance commitment and motivate skilled and knowledgeable workers.

The base of the Rover strategy for competition in the global economy has three major elements: investment in manufacturing practices and new technology (*i.e.* ,physical equipment; JIT), work organisation practices and human resource development. The origins of this philosophy can be found in " Rover Tomorrow- The New Deal", (1992). "Rover Tomorrow" is the consolidation of past changes in working practices, together with the introduction of contemporary management and technological innovations. These can be summed up as technical innovations including Just-In-Time, on-line quality practices and managerial innovations relating to labour flexibility, including organisational and social changes associated with teamworking and the equalisations of conditions of all employees (*i.e.* the removal of demarcation boundaries). From the management perspective, the realisation of technical innovations was considered to be dependant upon reducing trade union regulation of labour flexibility.( Stewart, *et al*, 1998).

The Rover Group's policy emphasises the following four main aspects: continuous improvement; flexibility of associates; devolution of authority; and communication. In September 1991 Rover management proposed a New Deal which centred on the following:

a greater emphasis on teamworking and continuous improvement;

full flexibility;

job security;

an integrated manual/staff grade structure;

streamlined trade union arrangements; and

an updated bargaining procedure agreement.

The latest alliance between Rover Group and BMW started in 1994 when BMW purchased 80% of Rover Group shares for 800 million pounds.( Scarbrough,*et.al*, 1996). But Rover was clearly undercapitalised and in dire need of new investment and new models. BMW has brought these together with German engineering and management expertise to the UK carmaker. (Brierley, 1996).

Consequently the organisation of work in Swindon has undergone considerable change. Being under ownership of British Aerospace, Honda and now BMW influenced the nature of organisation in the Swindon plant; in particular working under the ownership of BMW has markedly affected plant strategy.

### 6.3 Swindon Body and Pressing Plant

Rover established the Swindon Body and Pressing plant in 1958, and today is an integrated business unit within the Rover Group which, early in 1991 recognised the

engineering and manufacturing resources in order to establish an individual focus for the plant within the Group. Swindon Body and Pressing is one of the largest pressing plants in Europe. The company employed approximately 5,700 in 1974; this had fallen by around 2,300 by 1984 (Walker, 1987) and currently stands at about 3400 people in the Swindon Plant. The Plant designs and produces press tooling- jigs and assembly fixtures that are then used to press out body panels and build sub assemblies in its production shops. The customer of Swindon Plant apart from Rover, is the Honda car manufacturer. The site production covers three main areas and building (Figure 6.1).

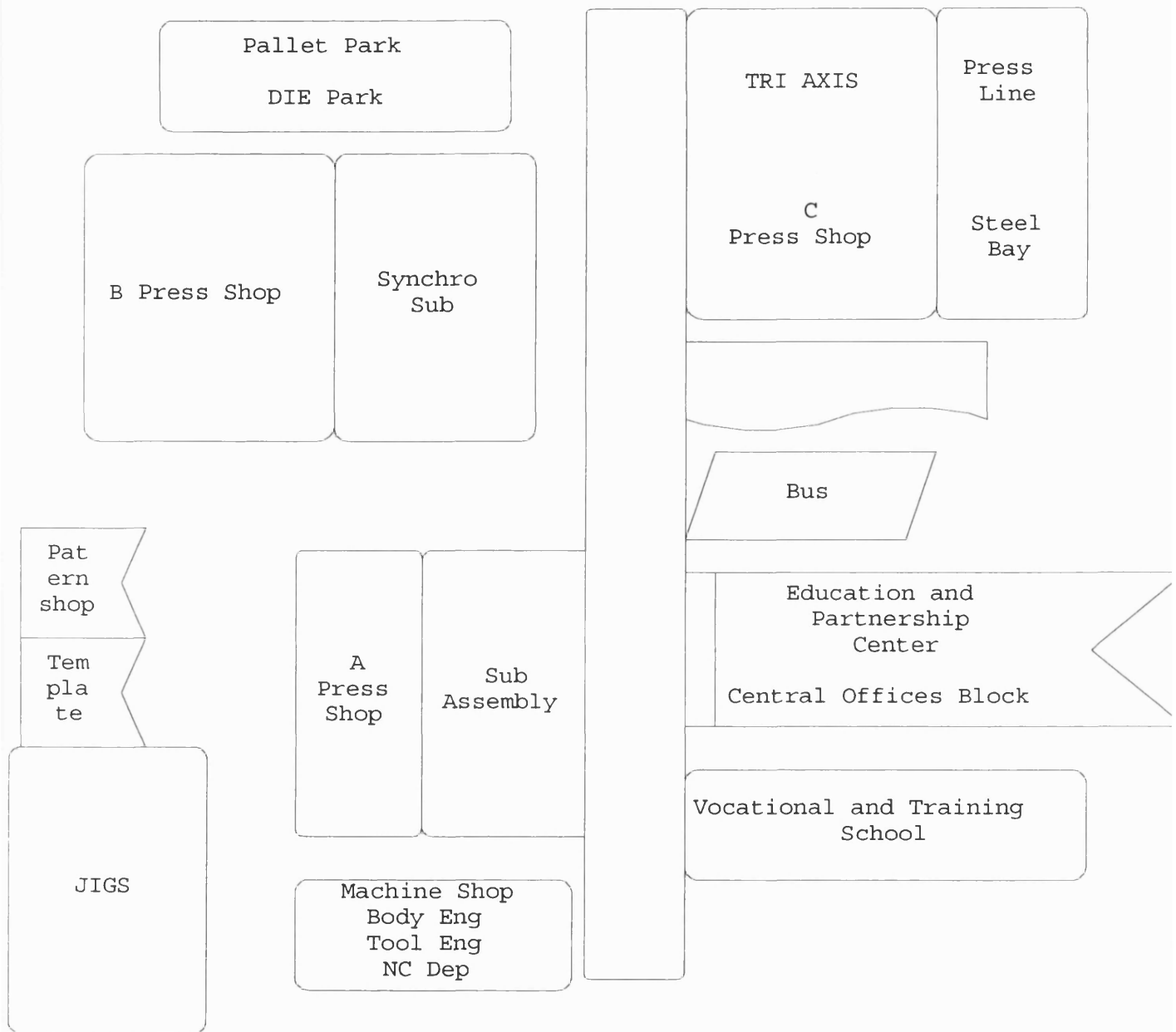


Figure 6-1: Swindon plant map and main building

#### 6.4 Investment in manufacturing practices and new technology

The Fordist system of production utilised fixed and simple technology which as Matthews (1989) explains set either manually or automatically to cut, turn or in some other way operate on a piece of material to produce an article that was previously specified in a design. What distinguished Fordist from a neo and post-Fordist systems of work is the level of investment in technology and utilisation of more flexible and programmable machinery and skills. To assess the situation of Rover Body and Pressing in terms of technology it is necessary to consider their facility and equipment on the production line.

Rover Body and Pressing is made up of engineering, toolmaking and product manufacturing services in automotive and other related areas. Body engineering and development has a fully integrated facility to manage the complete development of a body from pre-concept support, packing and style feasibility, to producing and launch involvement. Project teams direct all aspects of a product's specification, including component weight, piece and tooling costs. Functional support is provided by core engineering group that ensures process capability and rapid change control against recognised standards. The design of a body-in-white structure and its associated door systems hardware is validated initially by computer modelling techniques and once manufactured, by prototype and production testing. The Swindon Body and Pressing tooling has an integrated tool design and Numerical Control Programming function, covering the total process and is unique in the UK. Press and Assembly and Tool Manufacturing have the capability of manufacturing tooling ranging from the smallest



progression die to large multi-function tools for operation on high-speed transfer presses. In addition to the conventional 3 Axes and Tracer controlled NC machines, this plant is acknowledged as an industry leader in the use of CAD/CAM and 5 Axes continuous path machining. Panel production is capable of producing any size of panel. The care and attention which is committed to each stage of process is supported by the latest Statistical Process Control measurement systems and comprehensive on-site laboratory, tool maintenance, automatic die-wash and quality control facilities. The high technology transfer press manufacturing technology is the most up-to date method of producing steel car body panels. The Swindon plant in 1992 purchased two Hitachi-Zosen 5000 tonne Tri-axis automatic presses ( Cup Feed Transfer -CCFI Presses and Associated Equipment -installed 1993) to stamp large body parts. Other technologies are as follow: an 8000 Sq. Mt Pressurised Building, 9 Overhead Cables, 4 Interbay Transfer Bogies, 1 Blank turnover Unit, 1 Die Washing Facility, and 1 Bronx Blanking feed Line With unio Drives.

The Rover Group first implemented 'Just-In-Time' trackside delivery in 1989, as part of a major change in the manufacturing philosophy. 'Just-In-Time' means that supplies are delivered to the trackside just before they're used. There are no in-plant stores or sub-assemblies. This helps save time, space and there's less likelihood of products being damaged. This 'lean manufacturing' philosophy provides cost savings which are passed on to the customer. Rover Group is using a system of vehicle delivery which aims to meet customers needs, protect vehicle quality and streamline

the entire delivery process. Dealers no longer carry bulk stocks of vehicles at their site, but in a regional distribution centre. This reduces risk of damage during transit, avoids stock ageing, and makes inventory easier and faster.

Availability of these advanced technologies at the shopfloor is a part of the Rover strategy to move toward a post-Fordist organisation. Nevertheless, existence of advanced technology and the way workers utilise them are two different issues. Indeed, firms' strategy in the introduction and utilisation of technology is important. The neo-Fordist strategy was that of automating the interesting part of design, leaving the draftsman to manipulate symbols in a deskilled, and increasingly computer-supervised environment (Matthews, 1989). Under Fordism and neo-Fordism it was assumed that managers would seek ways to integrate workers into the production process without meaningfully involving them in the design of that process. Because planning the organisation of work was removed from the factory floor, and hence from the purview of skilled workers, managerial structures were able to relieve workers of authority and responsibility for the flow of work (Lazonick, 1990). The system of work was also organised so that it was feasible for managers to separate skilled workers from semi-skilled and unskilled workers. Alternatively, a post-Fordist system introduced flexible and integrated technologies which required much more participation of workers.

### 6.5 Work Organisation practices

Work-system practices capture the ways in which work is organised, in terms of formal work structures, the allocation of work responsibilities and the participation of employees in solving production-related problems. Work-system practices reflect the extent to which jobs are specialised and narrowly defined - or conversely, the extent to which job definition is flexible, with employees frequently participating in teams, rotating jobs, and successfully offering suggestions for improving the production system. Flexible job definitions reflect a "multi-skilling" or under neo-Fordism "multi-tasking" orientation. The key components of new organisations of work involve teamwork. Central to the new form of organisation is teamwork which is considered as an alternative route to the repetitive Fordist line production, thus giving enrichment to the work, more involvement and participation and control over work. According to some of the research relating to the nature of teamwork in the car industry (Womack, *et al*, 1990; Garrahan and Stewart 1992; Carr 1994; Elger and Smith, 1994; Sandberg, 1995; Danford, 1998; Durand, *et al* 1999), generally there are three different models of teamwork predominant in the world car industry: "a *Fordist model*; a *neo-Fordist Model* and a post-Fordist *autonomous model*". The differences between these patterns of work are related to some basic principals such as the level of skills, utilisation of skills, job rotation, time and motion methods, the role of supervisor or team leader, workers' roles and responsibilities and team autonomy. Job rotation has an important role in making a job more challenging and in providing a situation for the infusion of "know-how knowledge". One of the

characteristics of post-Fordist organisations is that they rotate employees around different jobs. Womack, *et al.*, (1990) believe that under lean production workers jobs are more challenging, shopfloor workers doing nonroutine operations<sup>i</sup>. To make this possible the post-Fordist organisation trains employees to be multi-skilled instead of multi-tasked, which is used by neo-Fordist companies<sup>ii</sup>. MacDuffie, *et al* (1997) studies have shown that companies use different levels of job rotation. Some companies use low levels and others train to do multi-tasks and skills, or rotate within teams, rotate within and across teams in the same department and finally rotate within and across teams and across departments.

This study has indicated that Japanese factories and most U.S.A factories are less likely to rotate their workers. In the post-Fordist model, multi-skilling is achieved

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<sup>i</sup> According to the MIT researchers (Womack *et al*, 1990) the success of Japan's motor industries to be attributed primarily to "Lean production". The term "Lean" means less of everything compared with mass production-half the human effort in the factory, half the manufacturing space, half the investment in tools, half the engineering hours to develop a new product. "Lean" production, moreover, was claimed to need far less than half the inventory on-site, resulted in many fewer defects, and produced a greater and ever growing variety of products. The main characteristics of "Lean" production according to Womack *et al* study are ; a) team work and team leader which given responsibility for functions previously carried out by indirect workers such as simple machine maintenance, quality control, material ordering and clearing the work area, b) a "Zero defect" approach to reduce rework at the end of line production, c)"lean" product development techniques, involving strong design team leadership, personnel continuity of development teams, and an emphasis on communications and simultaneous development, drastically reduce the time and effort involved in manufacturing, d)production in a small batches and using JIT technique, e)an absence of vertical integration. Instead, production of parts and components is rationalised in a hierarchy of suppliers.

<sup>ii</sup> The reason neo-Fordist organisation using multi tasks and post Fordist organisation multi-skilling related to their system of work. It is to say that in neo-Fordist production to solve the problems of absenteeism and repeated job, the idea of job enrichments , job enlargement and multi-tasks put into action. But Post-Fordist system introduce teamwork which is responsible for quality and quantity of the whole process, therefore it required that workers to be multi-skilling. (Watson, 1995; Wood, 1993; Jones, 1992; Coombs and Jones, 1988; Brown and Lauder, 1997; Amin, 1994).

through systematic rotation of jobs in the team, within and between departments but also through vertical promotion. Career prospects are open.

In the Swedish model of teamwork, the shopfloor hierarchy is replaced with functional work groups and autonomous decision making so that time and motion can be done based on negotiation. Teams select their own leaders and perform tasks that were previously done by foremen. The workers are multi-skilled through job rotation, with an available career path to everybody.

Because teamwork is recognised as an critical element of the new work organisation, this classification may be useful to compare different conceptualisations of teamwork for explaining differences between companies in the application of teamwork. One important function of teamwork under neo and post-Fordist systems of work is to increase flexibility which is based on three sorts of economic flexibility.

- i. Numerical flexibility is the ability to change the size of the workforce quickly and easily in response to changes in demand. Numerical flexibility is achieved through; a peripheral category of workers without long-term security of employment's short-term contract; part-time jobs or job sharing; going outside the firm to secure the services of subcontractors; self-employed specialists; home workers; agency temporaries. This is the key form of flexibility in neo-Fordist forms of organisation.
- ii. Functional flexibility; the ease with which workers can be redeployed to different tasks to meet changes in market demand, technology and company policy, (multiskilling workers). Functional flexibility is achieved through providing a core

group of employees with a degree of security, high wages and extreme training in exchange for their willingness to change tasks and to acquire and utilise new skills. In post-Fordist organisations functional flexibility is used as a mechanism for fast response to increasing market demand.

iii. Financial and pay flexibility; to facilitate numerical, and, especially, functional flexibility ( Atkinson, *et al.* 1985; Sabel, 1994; Watkins, 1991).

Within Rover, based on the New Deal documents, teamwork which is not part of the management structure is responsible for quality of work; routine maintenance; routine housekeeping/waste material disposal; involvement in plant/office layout and equipment; process improvement; cost reduction; control of consumable tools and materials; work allocation; job rotation; training each other; and material control. (Rover New Deal, 1992). The aims of the introduction of teamwork actually addresses the principals of Japanese management such as total quality improvement, total quality leadership, with most emphases upon training and workers' skills. In 1989 the Swindon plant rejected teamworking proposals. In 1991 the incorporation of Swindon into a new organisational unit-Body and Pressing- brought a change in the top management team, which had previously been characterised by instability with seven managing Directors in five years. This team brought a change in management style and sought the involvement of unions in running the business. Teamwork was introduced after the acceptance of the New Deal in a pilot area including the press-shop in 1993. In SBP workers were organised into team groups and each person had

prime responsibility for both the quality of their work and improving the production process. Swindon Body and Pressing was the last site of resistance to teamwork within the Rover Group (Mair, 1999). But teamwork has now been fully instituted at the SBP. This site has three main warehouse-A, B, and C. In each workshop, the work is organised into a number of Zones, around 8-12 people work together with different machines in a particular area. Based on the way work is organised they set up different teamwork activities and a team leader to supervise and distribute work among the workers. The work is organised in three shifts "Morning 6-14, Afternoon 14-22, and Night 22-6. Teamwork numbers about 10-12 and other areas 13-14, depending upon which areas the people work. For instance in the Boiling House, a team is 14 people whose members will be chosen based on their willingness, qualifications, background, and most importantly experience. In the maintenance areas there are three teams called "Blue, Red, Green". The team leader is chosen by vote but appointed by management. The main role of a team leader is related to technical and discipline aspects. Most of the people on the shopfloor work within a particular team. Workers have daily meetings with team leaders at the start of shift work. Each team has repeated and standardised tasks to complete under a particular zone and a defined time. Workers discuss and make decision about the pre-defined team weekly plan, about the rules and regulations which have come from the management, individual skills and training, daily and weekly material needed. Quality control is done through participation of shop-floor workers and experts from the quality department.

Rover policy is similar to the Japanese "lean system" clearly focused on shopfloor workers with greatly improved mental involvement in the production process, but within a limited and tightly sociotechnical controlled work environment. While Rover's New Deal mentioned the importance of job rotation in making a team more flexible and productive, in practice at the Swindon Plant the findings from interviews and observations indicate that SBP site utilised within team rotation which is the lowest level of job rotation. Occasionally workers are rotated between and among other teams or zones, but this depends on the situation. They rotate employees within a team hourly, daily and weekly. According to three of the ex-apprentices in building A, the concept of rotating or functional flexibility and multi-tasking are hardly used at work. Although they have been trained to work in different tasks and even departments, in reality they seldom move around, except in the case of absenteeism or shortage of workers, when an employee changes his/her team-group or department.

"... on the shopfloor when you are appointed to a job you work for a long time , I mean life-long if you going to stay here. Well even after a while you got friends here it is not fair that you go to another department and new mates. I know people working here for ages in one job. I'd rather stay here even when jobs are sometime a hassle and routine, nevertheless moving to other zones or department is not really difficult , you just ask the team leader and he can sort it out for you (2-Ex-Apprentices)".

The manager of Rover skill development in discussing the function of teams and job rotation pointed out that:

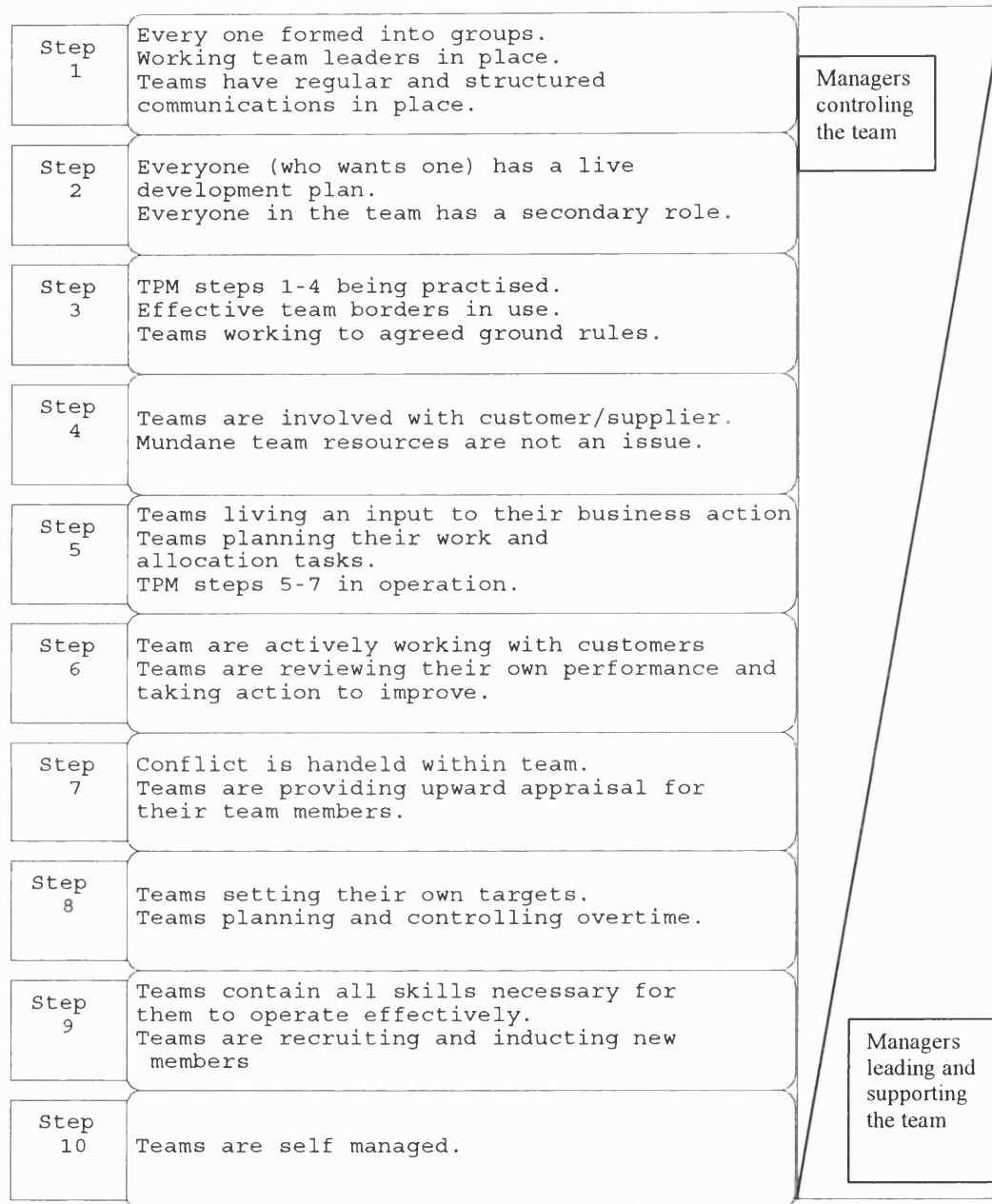
"You get some awkward sods who prefer to work on their own. I've got a team of nine people who work for me and they're very different. I've got at least one who doesn't fit in.... The trick is to leave him alone. Let him get on with things. The functional teams have a job to



do and within that people will take roles as appropriate and we're looking for flexibility within that, but we don't deliberately rotate jobs, unless it's in production, something like that, which isn't an area we're talking about. In production they do rotate jobs occasionally to give variety and keep people flexible. But within a team of technicians or whatever, generally speaking people will take whatever comes along and the team will handle it. But there will be those people who are particularly capable in some areas, we all know that."

This is a gap in the theory of teamwork because there is a lack of rotating work. A study of the Cowley plant by Scarbrough. *et al* (1996) has shown that there was not significant demand for job rotation from shop-floor workers, and the extent of rotation depended on the interest and enthusiasm of team leaders and managers. This raises questions about the flexibility of labour and the creating of more physical and mental commitment among employees. The Swindon plant doesn't use temporary workers, but expects the teamworkers to meet an increase in production demand through a flexible system of pay which was advanced after introduction of the Rover New Deal. In this deal Rover agreed to job security to increase workforce commitment. The views of the Swindon apprentices about unemployment and staying in the Swindon plant confirm the success of this goal. Most of the interviewees, 43 out of 44 said that they will stay at Rover. In SBP all team members go through an interpersonal skills assessment. This evaluation is designed to help employees to measure their journey towards being a "self managed team" and give them ideas for improving team performance. The evaluation milestones are set up in ten steps with each step having specific objectives (See figure 6.2). In each section there are ten questions which explore the activities that each team should be doing

within that step. At each step, after asking ten questions, then to improve the performance within each step, some advice is offered which each team is required to take into account. The process of improving and moving from step one to step ten is always supervised, controlled and determined by the managers, but then diminishes throughout to a final step of self determination in the team, so that the group progresses towards the daily, weekly and monthly targets with minimum help from managers.



**Figure 6-2:** Self-assessment steps for Teamworking at Rover Body and Pressings

A self-managed team is a fully empowered work group which has all the necessary practical, technical and managerial skills to deliver their business objectives. The

detailed picture of measurement of teamwork process in Swindon Body and Pressing (Cressey, *et al.*, 1999) has indicated that the company is half-way to the goal of self-managed teams. In explaining why teamwork is still semi-developed, Mair's (1999) study of the Swindon plant between 1991 and 1995, found that some factors make it difficult for a further transition towards increasingly autonomous self-management work groups such as: the social organisation of the work process with low worker control of work, the weakness of management skills at middle and lower levels, the significant role of unions in the management of change on site, and finally, the challenge between traditional and new management (piece-line vs teamwork) which workers believed that they had enough skill to manage their jobs than their managers could do it for them. Scarbrough, *et al* (1997) in their case study of the Rover-Cowley plant assert that there is a gap between formal corporate policy and plant-level practice. The gap related to high variability of teamwork among and within sections and dependence of the team on the team leader. They asserted this might be because of an untidy process of evolutionary change; conflict and the gap between old and new systems of management; and issues of formal and informal organisation.

Therefore, the Swindon plant teamwork in practice seems to be something between the neo-Fordist and Japanese models of teamwork and job involvement practice. Is it related to the level of training and learning of Rover employees, or is it that the social relations and culture of a Fordist organisation of work still dominate ? To answer this question requires looking at the entire picture and history of the Swindon plant particularly the process of skill formation, learning and training, which will be

discussed later. But first a discussion of promotion, in the company must be considered.

## 6.6 Promotion

Labour mobility is an important factor in assuring a process of socialisation, job satisfaction and a way of surveillance over workers. It is also an efficient means of allocating and matching workforce skills and jobs over time. In the Fordist system of work as Matthews (1989) argues the traditional craft unions regarded skill formation as acquired through an apprenticeship. Once an apprentice the way forward was to become a foreman or supervisor. Nothing learnt by apprentices would normally count in their seeking to become a technician or an engineer; they would have to go back and repeat all the mathematics they have learnt, for example to qualify formally for entry to a degree or diploma course. As Matthews claims, apprenticeships in a Fordist age provided a single point of entry for school leavers and young workers and a single point of exit, namely the apprenticeship qualification. The post-Fordist system is characterised by providing more opportunities for workers to progress and upgrade. In a post-Fordist apprenticeship system the career path for engineering workers is to undertake lifetime training and retraining courses, gaining credits at each level which enables study at the next level. It allows workers of any age to progress from an apprentice to a fully qualified professional, (e.g. an engineer) (Matthews, 1989).

Is there enough opportunity for promotion for Swindon Body and Pressing apprentices? If so, which factors are taken into account? Interviewees, particularly ex-apprentices and trainers, said that there are enough opportunities for promotion.

"About a year ago I had a position in maintenance engineering, but I was promoted as a Training Officer, what they looked at when they promoted me was how I worked with people, my experience, and background, attitude and punctuality. If you wish to go out of the Rover and find another job there is no limitation to stop you (3-Engineering Trainer). "

"Within the company there are a lot of opportunities for promotion, the company pushes people to get promotion, there are no restrictions. If somebody likes to change his/her job they can, there is enough flexibility, for instance I used to work on the shopfloor as in Electrical Maintenance but I changed my job and came here as a trainer in 1997 (2-Engineering Trainer). "

" It is a big question on the shopfloor, if you work well they keep you there, otherwise, if you wish they send you to office work. But the important step you get is out of the shopfloor after that there are a lot of opportunities (8-Ex-Engineering Apprentice). "

A number of important factors are mentioned by apprentices in promotion including: knowledge of job; punctuality; work performance over the past few years; flexibility and capability; solving problems at work as quickly as possible, recommendation by the team leader for career development.

According to Zuboff (1988) in traditional firms most skilled workers have few chances to be promoted to management tasks, and production jobs offered less opportunity for skill development. Referring to Chinoy's (1965), study she points out that with the structure of Fordist work, most workers have little reason to think of the corporation as a pyramid of opportunity. Chinoy's results of automobile workers also found a lack of opportunities to move into skilled positions. However, the

Swindon Body and Pressing site opened opportunities for apprentices' progression.

The manager of Rover skill development believed that there are many opportunities to get promotion.

"...the right example young people start here at 16, 17 and by 24 they are a manager with a degree, which having come through the apprentices. we ought to be able to say to them" if that's where you want to go, that's where you can get but its up to you. He added that his advice to apprentices in induction training is 'Its your apprenticeship, I've done mine, but the difference is that I couldn't see that and I wasn't encouraged to anyway. I'm encouraging you to look-not now, but in a year or two year's time I want you to look, go for it - say that's what you really want to do, we'll give you that chance."

The Swindon plant Managing Director who was promoted from an apprenticeship, is an obvious example of promotion from the shopfloor to top management.

## 6.7 Conclusion:

So far the research has addressed three sets of questions about the Rover Swindon Body and Pressing Plant strategy for the competitive national and international economy, namely, the technological issue, the organisation of production into teamwork and workers' career paths, arguing that at the micro level there is a relationship between technology adoption, organisation restructuring and human resource development in post-Fordist organisations. Indeed, triangulating these three fundamental elements characterise a company as Fordist, neo- Fordist or post-Fordist. Alliances with major leading companies such as British Aerospace and car manufactures such as Honda and at the present time the take over by BMW, has

affected the plant strategy and system of work. The Rover Group, and the Swindon Body and Pressing Plant specifically, use advanced technology such as "CAD/CAM", "Just-in-time", and "Total quality management". The production system is organised as semi-autonomous teamwork, where teams are responsible for the quantity and quality work. The career structure allows for vertical skill acquisition through promotion, and a job for life. In these respects Rover is clearly different from either Fordism or neo-Fordism organisation, although it clearly has some way to go in the development of the teamwork and multi-skilling.

In the next chapter the discussion will address the selection and recruitment processes in the Swindon plant.



## **7 Is Rover a Post-Fordist...? Selection and recruitment**

### **7.1 Introduction**

In this chapter we discuss the process of selection and recruitment in the Swindon Body and Pressing plant. In Fordist systems of work selection and recruitment of workers was understood by consideration of qualifications, attitude and interviews. In this process the managers used different mechanisms of qualifications, attitude tests, and interviews to screen potential young people. Fordist organisations of work were based on fixed and routine jobs. So employers needed particular kinds of personal attitude which responded to imposed discipline and a hierarchy of power, and the ability to be good rule-followers.

Under neo-Fordism the same criteria more or less apply although in some cases they emphasise key skills, including teamwork and communication, but these can be seen as mechanisms of surveillance and control. Meanwhile in a post-Fordist system, organisations are more flexible and follow a less centralised system, most work being done in groups, with most people spending a good deal of time communicating in some way with each other. The organisations cannot function efficiently unless people are good team-players, interested in working with others, willing to commit themselves, share the same corporate goals and continuously promote a culture of commitment (Reed 1992, Ezzamel and Willmott, 1997; Brown and Scase 1994). According to Windolf *et al* (1989) managers are interested in the applicant's ability to move between jobs, to adapt to changing jobs, or progress up the organisation. In a

post-Fordist organisation recruitment processes focus on key skills, work experience, attitude, initiative, creativity, potential for thinking and technical knowledge. In fact, the emphasis will be on personal qualities to work actively, communicate effectively, and initiate new ideas to solve problems and reduce faults.

In order to provide a better understanding of the links between Rover and labour market, ways of selecting apprentices are described. Specifically, this part will examine four research questions:

- 1) What are the factors that Swindon Body and Pressing deem significant in selecting entry-level apprentices and why are they used ?
- 2) What is the relative importance of each of the significant criteria in selection?
- 3) To what extent do recent changes in the Swindon Body and Pressing organisation of work affect the selection criteria?
- 4) Why did apprentices chose Rover Group?

## 7.2 Selection Criteria

A company policy for recruiting and selecting people is often the focus of attention in studies of the labour market (Ashton and Maguire, 1980; Maguire, 1986; Fielder, 1990). For Fielder, (1990) education, training and recruitment shape relationships between industry and the labour market. Recruitment and training are linked and can

be regarded as a continuum, at the level of the firm. At the centre of both is an understanding of skill. Both recruitment and training bring out the difference between skills as technical social attributes, and demonstrate that "skill" is socially constructed.

The internal and external labour market are two main source of selecting a workforce in order to utilise their work or develop their skills for the future. For the acquisition and development of workforce skills, firms have several options in responding to new skill demands created by technological, management, or work process innovations, or to regulatory changes (Stasz, *et al.*, 1997): hire employees with certain skills, produce skills in their own training programme, contract with outside agencies or individuals to provide training, or create incentives that encourage workers to invest in their own skills. The Rover Group selects apprentices from the external labour market, running a highly competitive and selective apprentices recruitment strategy. Apprentices apply after either GCSE, A levels or during or after college. The sample in this site mostly came from the Swindon local labour market with only one of them from Oxford. Selection is at age 16 and over from the local schools and colleges. A review of the sample of the apprentices in three schemes, indicate an age range between 18 and 23. The data indicate that of 39 apprentices, 12 were 18, 10 were 19, 8 were 20, 5 were 21, 2 were 22 and 2 were 23 years old. (See table 7.1).

Age(Years)/ Scheme	18	19	20	21	22	23	Total
Technician	4	2	2	1	2		11
Engineering	4	2	5	4	-	2	17
Business	2	-	-	-	-	-	2
Ex-apprentices	2	6	1	-	-	-	9
Total	12	10	8	5	2	2	39

**Table 7-1:** Recruitment age of Swindon Body and Pressing Apprentices

The selection situation is not a neutral one. For both the applicant and the organisation there is much at stake. Through employment individuals can acquire many rewards like income, social contacts, security, promotion and recognition. And the impact individuals have on an organisation's performance is often perceived to be large, thus an organisation is very eager to recruit capable individuals. Earlier studies have indicated that technical factors and individual attitude dominate in the recruitment and selection of workers. More specifically, the criteria which are used by employers are distinguished as suitability, capability and acceptability (Jenkins, 1982; Brown & Scase, 1994). The suitability relates to ability and skills to get the job done, capability refers not only to academic ability but the potential to be creative, have initiative and be a leader, and finally, acceptability involves social behaviour (Brown. & Scase 1994).

Apprentices, trainers and managers at the Swindon Body and Pressing site were asked to describe what factors were important in the recruitment of young people and how these relate to the skills and competencies for which the Rover Group train them. They mentioned various factors such as; qualifications and academic knowledge, work experience, communication skills, personality, aptitude test scales and age. As table 7.2 shows: 29 of 30 apprentices, 9 of 9 ex-apprentices, and 7 managers and trainers focused on attitude; 25 apprentices, 7 ex-apprentices, and 6 managers and trainers on communication and interviews; 25 apprentices, 6 ex-apprentices, and 7 managers and trainers on teamwork and work experience; 23 apprentices, 6 ex-apprentices, and 3 managers and trainers on high grade; 18 apprentices, 8 ex-apprentices, and 3 managers and trainers on qualification and finally, 10 apprentices, 3 ex-apprentices and 5 managers and trainers on appearance, tidiness and smart aspects<sup>i</sup>.

Criteria	Apprentices	Ex-apprentices	Managers and Trainers
Attitude	29	9	7
Communication/interview	25	7	6
Teamwork/ Work experience	25	6	7
High grade(GCSE or A level)	23	6	3
Qualification	18	8	3
Appearance /tidiness/ smart	10	3	5

**Table 7-2:** Criteria for selecting apprentices at Swindon Body and Pressing Site.

<sup>i</sup> In developing the table data, the interviewees are asked "which factors were important in your recruitment at Rover? Then they are asked which one was more emphasised?"

This means that in the selection of young people they cited the following criteria as important: attitude, appearance, communication and key skills experiences for new employees. One of the Engineering Training Officers said that:

"...compared to ten years ago when I came here was four GCSE minimum C grade plus some sort of personality, the entry criteria aptitude test and Its still the same. The test has changed but the process is similar.(2- Trainer)".

The Application For Employment in Rover Group" form shows that they ask people to give information about themselves, their skills and knowledge, experience and qualifications. Rover Group's aim is to achieve the best possible match between each candidate and the vacancies available, with different Development Schemes and with entry to each Development Scheme dependent on the applicants' academic qualification, aptitude and motivation (See Table 7.3).

Education- Secondary schools/Colleges attended (name and address),
Employment history,
Results of examinations- GCSE Grade in Maths, Science English Language; A levels; Other qualifications including vocational ( City & Guilds, NVQ, GNVQ); Language skills;
Describe in detail any practice activity you have been involved in, e.g. Young Enterprise/ Business Game.
Describe in detail anything applicants have done which involved teamwork in the area of sports, social, school or work activities.
Equal opportunities monitoring and general question such as; need work permit, any relative working for the company, references and Health.
Describe in detail hobbies or interests

Table 7-3: The areas of concern for recruitment of young people in Swindon Body and Pressing plant

On the receipt of all applications those people who most closely match the specifications stated in the brochure will be identified, for those people a student reference from their school, college or previous employer is requested. The purpose of this reference is to obtain more information to help managers make a more informed decision on the suitability of the applicants. On the basis of the application form and the school reference a selected number of people will be invited to attend further assessment. This will include aptitude tests, a team exercise, an interview and where relevant further tests. After the results of all these processes the right candidates will be selected.

### 7.2.1 Social attitudes

In Rover they look at the attitude, social behaviour and disposition of candidates, particularly, their ability to work in a team, self-reliance, motivation, self-discipline and teamwork experience.

"School reports, interviews, outside activities or experience, personality checkout. We ask them a few questions through interviews and then put together all this information and make a decision. I really do believe that these criteria make a better apprentice.(1-Engineering Trainer)"

The Manager of Rover skill development pointed to the main reasons for interviewing people: to find out about their attitude.

"...attitude is absolutely vital and if you ask any employer they'll all say the same. Any employer who's got any experience at all will also put those soft skills at the top of their list. They want an employee that comes in and works, is always there, is reliable, is enthusiastic, puts their back into it, thinks hard and the other things come quite a way down the list."

Hence trainers and apprentices asserted that other skills are seen as necessary for work such as personal skills, interview skills, dress and communication.

"... I mean communication , interpersonal and personal interaction are very important (2-Business Apprentice). "

"I think Rover is more interested in your general attitude rather than qualification. (3 -Technician Apprentice)"

"I do not have good GCSE results but I did very well in my interview.(9- Technician Apprentice)"



"For recruitment Rover do look at the actual candidates with criteria such as: doing well in the interview and how the person comes across; dresses nicely; - speaks well (3- Trainer)."

### 7.2.2 Qualifications

Successful applicants come to Swindon Body and Pressing with qualification such as GCSE (18 apprentices), A level (15 apprentices), City and Guilds (C&G) (2 apprentices), GNVQ (2 apprentices) and OND (2 apprentices). (See table 7.4).

Qualification Scheme	GCSE	A level	C& G	GNVQ (I)	OND	Total
Technician	7	3	1	-	-	11
Engineering	7	5	1	2	2	17
Business	-	2	-	-	-	2
Ex-apprentices	4	5	-	-	-	9
Total	18	15	2	2	2	39

Table 7-4: Qualifications of apprentices for recruitment in Swindon Body and Pressing plant

In terms of qualifications most of the apprentices mentioned that A level, and college qualifications were preferable. Generally a C grade in Maths and Science GCSE are perceived as acceptable qualification criteria. Rover Group use entry qualifications at

GCSE or above as basic criteria for selection of the best applicants. Different models of the labour market based upon technical-functional theory, radical and screening-signalling internal and external recruitment, describe and explain various aspects of worker selection<sup>i</sup>. Particularly screening theory asserts that employers use credentials as signals of individuals' ability in deciding whom to hire for demanding jobs, and this is why college graduates -and graduates of better colleges- are given preference for these jobs (Rosenbaum, *et al*, 1990). That is why most of the interviewees have A level or college experience. In two cases apprentices have passed the same courses in college (NVQ Level 3) but still they are determined to go through the Rover Group apprenticeship. Here Rover have been helped by the tight labour market which has increased competition for vacancies, leading Rover managers to be "much more selective" in hiring young people. The important point is that managers have a good opportunity to select not only workers with higher qualification and credentials but to choose young people with better social attitudes and behaviour. As one of the Rover trainers commented:

"Rover policy is to recruit people with high capabilities in terms of grade- grade A and B. if we can not get them we are looking for C grade.(1- Rover Trainer)"

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<sup>i i</sup> Woodhall (1997) explained why screening theory is valid in recruitment . "The reason why the screening hypothesis is important is that it has focused attention on the precise way in which education or other form of investment in human capital influence productivity, and has served as a impart knowledge and skills. The reason why employers continue to prefer educated workers is that not only does the possession of an educational qualification indicated that an individual has certain abilities, aptitudes, and attributes, but the educational process helps to shape and develop those attributes.(p.223)". But Brown (1997) argues that problems associated with the intermediary role play by credentials in articulation between education and the occupation structure in organisations which espouse a "flexible" rather than "bureaucratic" paradigm of organisational efficiency, is that the credentials are seen to offer recruitment personnel less information about what they believe they need to know when attempting to judge the relative merits of different candidates (p.742).

However, formal qualifications are only one factor, " Qualifications are important because they are a useful indicator of aptitude and motivation but they are not everything (Rover Group Document, 1997)". According to Brown *et al.*, (1997), academic qualifications give employers less than desirable information about the potential of employees, given that they convey information about the individual's ability and motivation to undergo the appropriate test and examination, rather than student's potential to work in teams or about their social and personal skills.

Although respondents commented that qualifications are less important than "soft skills", that does not mean Swindon Body and Pressing managers do not consider technical criteria. Indeed, when they talked about the relative significance of recruitment criteria they take for granted that academic ability was a necessary conditions for recruitment. The Swindon Body and Pressing plant, is equipped with advanced technology and so is a place of production that requires technical skills.

" I have done twice, OND in college and now here (3-Engineering Apprentice ). "

"When I finished school I went to college for two years -doing commercial subjects and then I applied to Rover. (4- Technician apprentice)"

### 7.2.3 School references

The school reference is used as a criterion of judgement about the applicants behaviour. In the case of school references the Rover skill development manager says that:

"...if I get an application and I look at the school reference and I see that this individual has worked and grafted hard for what they've done I'd rather take that individual than someone who is a naturally high flying academic that's found life easy all the way through. And yet I've had success with both of those. But I've also had some awful failures, very bright people, but I just haven't been able to make them work. But then it can happen the other way. You can get people who are probably very bright who have underachieved, so I do take a lot of notice about what their educational establishments say about them. I really do. When I first came into this job I didn't, I used to think 'Schools are bound to say they're good. Let's forget that. What do we see here?' because people used to come in with examples of things that they'd done. I remember one lad came in and he dragged this coffee table in on the bus. It was huge. He dragged it in and it was a superb bit of work and we probably gave him a job on the basis of that and yet I can remember thinking that actually someone once said to me 'Actually, when you think about it, that individual has got a natural flair for that, but how do we know about his other qualities?' We've allowed ourselves to be fobbed by the one thing that we've seen. And because the educational establishments have taken away most of that now and education is much more generic, it's made us think hard about the personal skills that individuals are going to bring to it because they're all on a level playing field. None of them know anything about this sort of business. So it gives us more time to focus on things like enthusiasm, keenness, disposition, their attendance levels, and so those are the questions we ask on school references. What's their attendance like? How do they behave? Do they require constant/no supervision? Do they work well in a group? Do they work well on their own? What sort of reaction do they show to authority? Do they show resentment? All this sort of stuff. Very simple, but we spend a lot of time thinking about our school reference forms. All the academic stuff, the teachers just have to tick a few boxes and it probably takes less than a minute, just a very short comment section. And I take a lot of notice of those because my profile for a young person is those things like disposition, motivation, things I've said. Those are what's important. Of course they have to meet the minimum academic standards. If we do not do

it, I would leave out all the ones that have got all the A's. That's not the way we do it. "

He added that they always say that in the school reference form 'Please feel free if you do not want to fill this form in to tell us' but this rarely happens.

" I got a phone call from one teacher once and he said 'You sent me a reference and he's part of my tutor group and I've chosen to leave it if you do not mind' and I said 'Of course, that's fine'. And he said 'You'll understand why. I would personally say that you're the perfect business for this young person. He's really enthusiastic about cars, but he's even more enthusiastic about the radios that are in them'. That was his reference. So I just said 'Oh'. "

#### 7.2.4 Key skills and Work experience

Rover, in selecting young people, ask information about the kind of key skills activities they have had. Candidates are asked to describe in detail any practice activity they had been involved in, e.g. Young Enterprise/ Business Game. In this section, if persons apply for Engineering or Manufacturing they are supposed to answer questions like- what he/she had to do, what materials were used, what tools were used, how he/she planned the project, what problems he/she encountered, how he/she can overcome the problems. And if a person applies for Business or Clerical they should answer questions such as; what he/she has done, how he/she organised the activity, how many people were involved and how they were organised, how he/she planned the project/what administration was necessary, what problems he/she encountered, how he/she overcome the problems. Also they are asked to describe in

detail anything they have done which involved teamwork in the area of sports, social, school or work activities.

Detailed accounts of any work experience (including part-time work) are required. This should include the following information; where he/she worked/for how long, his/her duties, to whom he/she reported, what he/she liked and disliked about the work, his/her relationship with staff, whether or not he/she would like to do that kind of work as career. Indeed key skills and work experience are regarded by Rover as an important indicator of a candidate's ability to be productive. In the training schools and the shopfloor, apprentices have had a variety of work experience outside the Rover Group such as;

before I came here I had experience in another factory.

I have worked as an apprentice in a garage in Swindon.

I have got one years work experience outside Rover with a factory

I had two weeks in an electrical company

I spent two weeks work experience with British Motors

All the work experience I had was in McDonalds and Tesco

Some of them had no work experience and came to Rover Training School straight from school and college. Although the kind of work experience which apprentices have is not essentially related to their future career, it seems Rover managers realised it's very difficult to find apprentices who exactly match their career goals. However, they look at the previous work experience as an indicator of understanding a firm's

culture, commitment, teamwork ethos, work ethic, and particularly dispositions such as punctuality, respect for a firm's goals, and desire to add value to the company.

There is often concern about the validity of selection criteria in finding the right persons for the company, but Swindon Body and Pressing managers and trainers were positive about their selection criteria. They argued that their criteria worked in effectively attracting and choosing better apprentices for their schemes.

" I truly believe in the past engineering was seen as a job for the steady people who work very academically and that has changed now. Because engineering is now a job which people are aware, motivated , not necessarily bright, keen , enthusiastic, do have some form of academic background. It is not enough to learn the job, we help them through NVQ and through the college, and also key skills. I feel this is very important that. (2- Trainer)."

" We are happy with our method of selection and training . Since I applied for Rover -1990 standards of training are going up each year, we usually get good apprentices (3-Trainer)".

Recruiting young people and training them based upon Rover standards instead of getting graduate students from university has a lot of advantages for Rover group.

The Manager of Skill development commented that :

" I definitely think there's a place for both. I would be wrong if I didn't say that going out and recruiting graduates, someone who's got a real specialism and has done some good research work at university... the disadvantage with them is that probably culturally they're not attuned to the way the company works. The very significant advantage of taking someone from an educational environment and bringing them on through is that you're able to instil the right sort of culture. They grow up in an environment where they understand teamwork, they understand the need to be flexible and they understand the requirements of lean manufacturing. So they're worldly wise and if they move into positions of management, which a lot of graduates do, they've actually experienced what it's like to be down there and having

to work their way through the various layers. I think it's quite important. Going back a number of years I would have said it wasn't important. I think if you're in an environment where there's a culture of teamwork, leadership, working together, I think it can have some significant benefits for individuals who've experienced life at all those different levels. But you can get into management positions early. Because that's important....we want to actually get people into management very young and therefore the earlier they start I suppose in an organisation, they have an advantage. But there are advantages the other way. If you get someone who's had an undiluted and very academic approach, they can fit into a team very well and come up with some exceptionally good creative ideas. There's no doubt about it, they're used to projects, they're used to having to make a lot of decisions and doing their own planning. They haven't got people at their shoulder all the time saying 'Maybe you should do this or that'. So there are lot of advantages of the pure university system as well. I recognise that. I suppose as a training manager and a person who employs people I'm looking for both. I would really like the best of both worlds. "

It is generally reported that formal procedures are employed more frequently where labour market conditions are tighter and more difficult (Chrrington, 1995; Atkinson *et al*, 1996) Although a study by Elias and White (1991) indicated that the labour market did not have a particular impact over the recruitment methods used by employers [quoted from Atkinson, *et al* 1996]. Also Jenkins (1982) claims that during a recession, employers tend to lower their acceptability criteria. Managers and trainers of Swindon Body and Pressing have expressed the view that recruitment criteria, generally, have not changed in the past decade, but recently they have placed more value on the soft skills such as teamwork and work experience as additional criteria; the reason perhaps, being related to the value and prestige of Swindon Body and Pressing apprenticeship in the local labour market. So there are a large number of



applicants interested in entry to the apprenticeship. The manager of Rover skill development who also has responsibility for interviewing and selecting young people, in describing the importance of personality, social relations and key skills in recruitment of young people, claimed :

"It's pretty important to be honest because the thing that matters to me about young people - and I've learnt over the years it's not that they're the best academics in the world - Of course if you said to any employer 'What do you want?' it's like a sweatshop and they'd say 'I'll have that and that and all these as well' because you want all the best. There's nothing that's undesirable. But given the sorts of strengths and weaknesses that exist I would major on things like individuals who have a real desire and enthusiasm and keenness to work. To be honest I'm not really that bothered if they're not the world's greatest social mixer".

It seems difficult to distinguish and talk about the relative importance of technical and social skills in Rover's practice of selecting young people. According to Windolf, *et al* (1989) underlying social criteria such as age, marital status, and domestic responsibility are viewed as necessary conditions for the skills required to get the job done. Typical statements of qualities demanded are highly specific but are very difficult to classify in terms of a simple social versus technical dichotomy. Accordingly Ford (1989) argues that it is desirable to integrate and balance hard and soft skills, because service-oriented organisations push responsibility for communication, consulting, explaining, negotiation and participating to front-line employees. In organisations that are searching for human resource strategies to sustain their dynamic comparative advantage, there is an emerging conceptual shift from concern for the appropriate division of labour to concern for appropriate balance

of hard and soft skills. Therefore, with regard to suitability and acceptability criteria, it seems Swindon Body and Pressing Plant takes into account integrating and a balance of technical and non-technical skills.

### 7.3 Why did apprentices choose Rover Group?

Why did apprentices decide to come to Rover? What encourages them to apply? Choosing a career has a demand and supply side, influenced by local labour market conditions. On the demand side are industry and employers who are always looking to screen the most suitable young people, with potential and on the supply side are young people who are looking to find the right career. Apprentices have expressed a variety of reasons for joining the apprentice scheme within the Rover group.

It is apparent that people's career choices do not always reflect their interests, and that their environments are not always supportive (Holland, 1985). There are many instances in which choice may be constrained, for example, by economic need, social forces, family dictates, discrimination or educational considerations. In such instances, career choice may be less an expression of personal interests than of other factors. Nevertheless, here our interviews highlighted the function of key variables that influenced the choice process.

Economic reasons such as a well paying job, and job security were important factors.

"I came to Rover because they paid you more than other firms. I remember when I was on a third year apprenticeship with a garage my brother was on the first year apprenticeship here, and he got paid more

than me, so I decided to come here because age was not a limitation to entry and I did. (11- Technician Apprentice)"

"I had opportunities for three apprenticeships, one was in Oxford-Heating and ventillating ; the second, working as a technician who trained and fixed specific machinery, and third , was Rover Group, I chose to come here , because of its name, and money is very good as well. (3-Engineering apprentice)"

"I came ten years ago and still do believe that the Apprenticeship scheme is a good one you get paid well and gained good experience (Engineering Trainer). "

Cost-benefit issues motivated most of the apprentices to apply to Swindon Body and Pressing; the level of pay during the apprenticeship and also the guarantee of a job when qualified. Apprentices were aware of the profitability and rate of return on investment in themselves and also of their enhanced earning power when qualified which suggests they are operating with a version of human capital theory.

Social issues such as a prestigious job, a well known-company, Rover's reputation, and issues like the high quality of a good apprenticeship, were emphasised by apprentices.

"Around the Swindon area the Rover Apprenticeship is the best one , well paying, and good quality because they spend a lot of money on the workshop and training school (7- Training Apprentice)"

"Prospects in the company are very good. Because a lot of companies in Swindon due to my age wouldn't take me on. But Rover never had an age restriction when I came with my A-level. if you get a skill behind you which Rover is offering and also the fact that I came to a solid company, because some of my friends started apprenticeship with small companies when they finished they found that the job was not there for them. (17- Engineering Apprentice)"

The influence of parents and family on education and career choice has received considerable attention (Hodkinson, 1996; Brown, 1994; Woods, *et al*, 1998) Most of apprentices (n=25) asserted that family pressure didn't influence their decision to join the Swindon Body and Pressing apprenticeships scheme.

"Getting a chance of training for four years and then going to university was the most important factors . I got some idea from my friend but my parents did not advise me and I made this decision personally. (10- Technician Apprentice)"

Satisfying personal interests, an interesting career, interesting practical jobs, and in one case where a young women said it was to show people and her friends that it is not difficult to get a job at Rover Group were also mentioned by apprentices.

"I came here because I was interested in designing. My friend or parent really did not influence me, but I fancied coming to Rover and getting skill and going to higher education. (9-Technician Apprentice)"

"...I like going in to the car industry, I did not like going to the college. Here during the apprenticeship you are being paid and you can go to higher education as well which is a good chance for me (5-Engineering Apprentice)"

"I always wanted to be an engineer, and Rover is one of the very few companies in this town. I applied three times, once when I was at school but it was not successful because I did not really achieve the correct levels. So I went to college and again applied still unsuccessful, because I had not enough experience either, so I left college and got another job for one year and gained experience. But I still want to come to Rover and work here as an engineer, because I had a lot of friends here. (1- Engineering Apprentice)"

"When I was at school it was a great chance for me because we had an engineering course which introduced me to that. I like engineering its practical work, I was very keen. I had a teacher at school who was very helpful, interested, together with him I applied here. I only applied here with GCSE . I did four years engineering apprenticeship

and then was appointed here as a trainer. My encouragement to come here really was, security of job, financially, you can not get away from that. All these motivated me to stay here for a long time (2-Electrical Trainer). "

"I like practical work, so I found the Rover apprenticeship interesting and applied for here. (4-Engineering Apprentice)"

Noticeable was the male domination in the- engineering and technician apprentices where there was only one female. In Britain, the professional engineering industry is traditionally a masculine domain (Evetts, 1993), but the female apprentice explained why she had decided to enter apprenticeship engineering.

" Most of the Rover workers are men, and I always wished to come here and you know this is a factory dominated by men. I decided to come here and I did. (4-Technician Apprentice)"

Perhaps one could say that historically the image of engineering has been tough, heavy, dirty and to do with machinery. These cultural images have remained very powerful and have reproduced aspects of occupational segregation whereby engineering has been perceived as unsuitable for women, except in the two world wars (Braybon, 1981; Summerfield, 1989). Both women and men have seen engineering as a man's world, and until recently this notion has remained largely undisturbed (Newton, 1987).

Overall, what is emphasised by the apprentices is the importance of economic, social, institutional and personal factors<sup>i</sup> (see table 7.5).

Important factor in apply to Rover	Apprentices	Ex-apprentices	Trainers
Good pay	30	9	3
Reputation and Prestige of the factory	28	8	3
High quality training	20	5	3
Chance to go on to higher education	17	4	3
Personal interest to subject	15	4	2
Practical job	7	3	3
Job security	4	3	3

Table 7-5: Important factors in applying for apprenticeship in Swindon Body and Pressing plant

When we look at the apprentices' reasons for coming to Rover: 30 apprentices, 9 ex-apprentices, and 3 trainers mentioned good pay; 28 apprentices, 8 ex-apprentices, and 3 trainers, reputation of company; 20 apprentices, 5 ex-apprentices, and 3 trainers the high quality training; 17 apprentices, 4 ex-apprentices, and 3 trainers the chance to go on to further study; 15 apprentices, 4 ex-apprentices, and 2 trainers the personal interest; 7 apprentices, 3 ex-apprentices, and 3 trainers for doing practical jobs and 4 apprentices, 3 ex-apprentices, and 3 trainers job security.

Another factor in socialising people into work lies in the value they place on it. Apprentices were asked to identify in relation to other jobs in Swindon, whether working at Rover gave them a certain status. They responded by saying that having a

<sup>i</sup> The table data was quantified based on a direct question of interviewees that: "Why have you

job within Rover means more status because Rover is considered as one the most prestigious companies in Swindon.

"Every body recognised Rover is a big company with good pay. Rover and Honda are two big companies in Swindon, but the difference is Rover has Apprenticeship but Honda doesn't (5-Ex-Apprentices). "

"Yes, I see my friend's family who ask me where I work, and I feel very comfortable.(6- Engineering Apprentice) "

Apprentices added more factors which make work at Rover prestigious such as, treating people with respect:

"I like it here, I know a lot of friends working at other factories around Swindon and they hated their jobs. Because they are treated as robot but at Rover they treat you as a person, with respect . (9-Technician Apprentice)) "

Nevertheless, three apprentices claims that work in Rover does not give them a certain status.

"I would say, not really. I wouldn't think, so many people work here for Rover. It is quite common. ( 14-Engineer Apprentice)"

Having a job and less possibility of unemployment may be considered as an element of socialisation in accepting more the culture of the organisation. Apprentices defined how much unemployment is a problem for them.

"No, because I like my job and always try to cope myself with new changes in my career. (4 -Engineer Apprentices) "

Others with reference to the amount of money Rover spent on the apprentice schemes, argue that unemployment was not a problem.

"I do not think so, all this [investment in the] apprenticeship means that Rover has a good future. (14-Engineer Apprentice). "

"...no because when we finished here we are all skill-man and have trained so Rover needs our skills.(6-Technician Apprentice). "

"...not , it is really up to you, you can go to other factories, but I do not think Rover will let you go. , because they spend a lot money here. (15-Engineering Apprentice)"

"I hope no, unless Rover is closed down. I can not see myself leaving to move because the scope here to develop yourself is good. In a large company like Rover I feel I am at the bottom of the ladder and hopefully looking to go to the top. (5- Technician Apprentice)"

They believe that they will be working at Rover in five years time.

"Provided business keeps going well and we can keep selling we do not have any problems. I always see advertising in the local newspaper to poach maintenance workers from Rover and Honda. Most of the time there are vacancies here but a few years ago there were not . Which means we have a good chance with Rover for a long time. Anyway you can go to any company there is no restriction here to ban you (8-Ex-Apprentices). "

Such feeling among workers is not only vital for the company in developing and implementing its strategy of investment in their employees but is necessary for workers, to make sure they do not lose their job, a feeling which motivates them to acquire new skills and follow company policy and regulations. This is part of the bargain between employers and employees to ensure that employers do not lost their investment in training by poaching.

The results of this study indicate that most of the apprentices interviewed were satisfied with their choice of apprenticeship, but mentioned various reasons for coming to the Rover group which more or less conform to the perceptions of human



capital theory. This is because a career path has been laid down by the company so that they believe they will be well prepared, particularly in engineering skills, which would help them in the case of redundancy to find similar jobs in other companies like (Honda) in the Swindon local labour market. Ford's automobile assembly-line system, was at best, a mixed blessing to the auto workers. While they were generally well paid they were also dehumanised and treated as single purpose machine tools, historically in noisy, dirty, physically and mentally stressful, endlessly repetitive, and mindless jobs. But Rover apprentices believed that Rover had developed a post-Fordist humanistic culture at work which largely focused on quality and high productivity. Rover employed young workers who were carefully screened for attitudes compatible with company goals. Their wages and benefits are higher than comparable companies such as Honda. This perhaps results in having a workforce that is highly motivated. For as long as operations are expanding, even a disappointed worker has reason to support the system for new jobs available within the company give hope for improvement.

#### 7.4 Conclusion:

In this chapter we considered the question of selection and recruitment to examined whether Rover Body and Pressing Plant is a post-Fordist organisation in these terms. The results show that in the process of selection and recruitment Rover considered qualifications, attitude tests and interviews. Due to the system of work which is based

on teamwork and semi-autonomous teamwork they look at personality, and emphasised both technical background including high grades in academic qualifications, and non-technical qualities such as key skills particularly teamwork experience and work experience. Working in Rover has a number of advantages for young people compared to other local companies in terms of wages, social status and a career.

Based on our model Rover's policy and criteria in recruiting is very much in line with the policy and criteria which are used in post-Fordist organisations, although there are some ambiguities in Rover's thinking about their criteria in relation to key skills which we will explore in the following chapter.

## **8 Is Rover a Post-Fordist...? Training and Key Skills**

### **8.1 Introduction**

In addressing the question of whether Rover is a post-Fordist organisation, we are going to consider in this chapter four sets of claims regarding the process of skills development particularly in relation to key skills. The process of skill formation and skill utilisation in post-Fordist organisations is an integrated part of the system of production. There is a huge debate about the nature and function of skill formation, particularly challenging issues concern the nature and role of key skills, multi-skilling and thus the role in training, recruitment, promotion and progression. It is argued that there are differences between Fordist, neo-Fordist and post-Fordist system in relation to skill development and training. In Fordist training there was a strict division between mental and manual labour; between managers and workers, skills were defined more narrowly to a specific technical or manual expertise which followed on single skills with little on the job training. In a Fordist organisation there was little chance to progress through the company by training.

In neo and post-Fordist systems training and skills development has changed, although this change is subject to the conditions encountered in the two systems of work. In a neo-Fordist organisation training is usually consider as a vehicle for developing multi-tasking. In the post-Fordist processes there is greater demand for 'knowledgeable' workers, skills are defined more broadly to include social , intellectual and creative dimensions and there are good opportunities for going on to

higher education. In a post-Fordist training links between theory and practice are considered and trainers are seen as facilitators of learning. The curriculum not only focuses on maths, science and technology but also on key skills such as teamwork, communication, problem solving, information technology and “know how”.

With respect to key skills there are three aspects which distinguish neo from post-Fordist organisations. First, it is argued that the rationality and function of key skills depends on whether an organisation is working under a neo or post-Fordist system of production. It was pointed out in chapters three and four that managers in neo-Fordist organisations may use key skills as a mechanism of selection, hiring, surveillance, promotion and control. While in post-Fordist organisations it will be used to give more autonomy to the workforce with the involvement of the workforce in generating new ideas to cut the costs and increase productivity. The second is about the social domain aspects and transferability of key skills; and the third is related to the ways organisations teach and deliver key skills, and the extent to which they act to forge links between teaching key skills and organisation culture.

In following those questions this part of the study explores the process of skills development and specifically the role of key skills in training and production processes within Rover-Swindon Body and Pressing Plant. The Swindon site case study is designed to study the managers, school trainers, apprentices, and ex-apprentices views about the skills formation and its implication for their work in relation to the Body and Pressing jobs also more specifically in order to:

- i. understand how training and key skills are tailored in relation to the work apprentices will undertake at Rover;
- ii. address how the training, key skills and work at Rover fits into the apprentices' overall career plans and aspirations;
- iii. assess the degree to which the training in key skills are consistent with their expectations of work at Rover and
- iv. draw out the significance of key skills to the production process within Rover;
- v. evaluate the degree to which apprentices and ex-apprentices use their skills and particularly key skills in the production process;

## 8.2 The Organisation of training

Processes of training and skill development within Rover Group, and particularly Swindon, have a certain history. The history of training and skill formation in the Rover group may be divided into three distinct periods; (a) informal training before 1960, (b) structured training and learning after 1960 and government intervention in the field of training and the levy system after 1964 and, (c) the emergence of new management, organisation of work and the introduction of the Rover "New Deal" in 1994.

### 8.2.1 Informal Training

Training and learning before 1960 was informal without either a national structure or a company structure. At that time Rover like many other companies did not have formal training. Craft apprenticeship training was traditionally the main source of developing skills for the manual workforce. During the late 1950s and early 1960s

many companies in engineering, particularly were starting to make the first steps towards a more uniform and defined approach to training.

### 8.2.2 Structured Training and the Government Levy system

The Rover group started a training school for a limited period of time for their apprentices to obtain some general skills. The Manager of skill development in the Swindon plant, enlarged upon this saying :

"I joined that five year apprenticeship, five years or age 21. You couldn't finish an apprenticeship before 21, so I did about 4 to 5 years. I was 15 when I left school. I did all my further education at the local College and then the College of Higher Education on a part-time basis. In those times that was unusual. Not every company was expected to, they didn't have any requirement to provide any form of education. You were indentured to an organisation and it was up to them how they chose to develop you."

He added that in this case the Rover Company was becoming quite progressive and they constructed an apprenticeship which had some structure, also they made it mandatory for all young people to undertake some form further education on day release. The brighter ones went on to do fairly high qualifications, the ones that were in the mainstream did their City and Guilds and so on. The structure of the scheme was that individuals were assigned to a section of people, and one person in that section took responsibility for them, prepared the work and ensured that the apprentice informally covered certain areas of skill and knowledge. The Manager of skill development mentioned that they provided parents' reports:

"...a bit like a school report, and you didn't have any input into that yourself. It was just done to people and sometimes it was sent to people's home to their parents. For those days it was very progressive. During this period training was entirely left to the efforts of individual firms. "

In 1964 the Labour Government in an attempt to rationalise training standards introduced Industrial Training Boards (ITB). Training boards were set up to oversee training development activities for industrial sectors and for the engineering sector, an organisation was established called the Engineering Industry Training Board (EITB), whose aim was to establish a minimum standard of training within an indenture type apprenticeship. Thus, the engineering industries that were offering nationally recognised indentured apprenticeships would have to meet certain criteria. The way they imposed it was by implementing a levy. It was 1% of payroll, which for the industry was a considerable amount of money. For companies which didn't offer apprenticeships or if they offered them and they were not to the national standard, the government would levy them 1% of the company's total payroll to support those other companies that were engaged in training. So for a company like Rover, in order to avoid the levy, they had to demonstrate compliance with government standards. Thus the third stage of the history of training in Rover began. The government standards were that every apprentice would attend a 36 weeks foundation training programme at a College of Further Education, to cement the basic foundation requirements. In addressing this policy, Further Education Colleges were involved in setting up preliminary apprentice training establishments, for those small companies who couldn't afford their own training schools. Thus, apprentices acquired

knowledge through foundation training on a broad range of engineering topics. Apprentices would have to have, at least for the first year a day release programme as a minimum to reach a recognised engineering qualification. The second phase of training was a modular system which was nationally imposed. Apprentices had a menu from which they could pick modules. They took two modules, a preliminary one and an advanced one, and they had to meet all of the standards and produce as evidence a log book, demonstrating that they had met the time, quality and overall standard of the work they'd done. These were called base tests. Apprentices had to complete a number of base tests, had to do the foundation training and had to do at least one year of further education before they could receive the national certificate which was the EITB apprentice certificate. A lot of companies attempted to try and meet the standards. It could be argued that this system raised the standards of general apprenticeships across the country as a whole.

However for the manager of Rover skill development the levy system was very bureaucratic, inflexible and the inspection system autocratic.

"The one thing that wasn't in its favour was because they had very robust ideas and the boards were made up generally of trade unionists as well as company people, when we wanted flexibility and wanted to start changing some of our training to look at ways and means of removing old demarcations and saying 'We're getting all this technology now and we actually want people to be able to do electrical and mechanical work' the Board actually said we couldn't do that."

He added that the trade unions influence on the Training Boards were responsible for these rigidities. Also the trade unions weren't open minded- because they felt that



training needed a four and a half year apprenticeship minimum to be able to be an engineer which in his opinion wasn't the case.

"...the trade unions don't want a more flexible system - the two big modules were too big. We had a real impasse with the Board. In the end there was us and Ford and a few others who said 'Unless the Training Board moves to meet our position, we'll form our own organisation'. So they said 'OK, you write out what you want' and between us we developed what was a segmental system of training - we said let's have a pick and mix, like building a wall, we want to choose the bits that go into that wall."

### 8.2.3 The Modern Apprenticeship

The Conservative government replaced the interventionist Industrial Act and abolished most of the mandatory trade union involvement in, and monitoring of, training arrangements. This has been replaced with a deregulated labour market, employer-led's system of Training and Enterprise Councils (TECs), interfirm groupings of employers, charged with co-ordinating training locally and spending central government funds on YT and training of unemployed people (Gospel, 1995).

Finally, in 1994, with the introduction of the Rover "New Deal" began the third stage of skill development in the Rover group. The necessity of learning and developing skills, made Rover Group address them within a framework of the modern apprenticeship. The prototype of the modern apprenticeship (Integrated Engineering Development Scheme- IEDS) was introduced in 1994 by the Government,

incorporating NVQ's at Levels 2 and either 3 or 4, GNVQ's at either intermediate and/or Advanced Level and seamless progression to degree or Higher National Diploma level. The Rover Group IEDS programme was awarded the first (Secretary of State's) Special National Training Award for Modern Apprenticeships in 1996, with 350 apprentices under training at various stages of the scheme in 1998. Rover also conceived and championed the National Training Framework for Engineering which is designed to promote a more inclusive approach to modern apprenticeships. All young people in Rover were surveyed in 1996 and 1997. The purpose was to review their experiences of education and training, analyse levels of satisfaction and gather data on attitudes to future learning, including Individual Lifelong Learning Accounts, and the importance of preparation for living and working in Europe.

Rover, in 1998, was working closely with the Training and Enterprise Councils (TEC) to pilot the new Training Standards Council self-assessment and external inspection system for Government funded training on a Group-wide basis. Under the TEC system the training scheme has changed from the old module segment system to outcome based schemes of NVQs. The apprentice starts to produce evidence, but their outcomes are more competence related. The Manager of Rover skill development commented that the new system required apprentices to demonstrate competence in the workshop, enabling the company to tailor its NVQ to the specific curriculum wanted by the company.

"...but the flexibility for us was more flexible than the module segment system because we can choose a tailored NVQ which meets our requirements as best as we can define for now and the future. So the system is good, the financial support is probably not as great as it was in the old levy day, but in order to maintain our position as a national provider, we have to obviously meet all the TEC requirements, endure their audits and inspections, as well as - funnily enough - the training boards. Because now we've got three parties involved in the overseeing of training - the employer, you've still got the training boards who are appointed as the ITO, the training organisation, the lead organisation for the area, and you've got the TEC. So we're contracting with the TEC's, the Industry training organisations and of course ourselves and the young person. So we've got more parties involved here."

Nevertheless this system was grafted onto Rover's which was designed to provide a high skills workforce to meet the introduction of new systems of production and technology.

There is a relation between skill formation and national education and training history. Kochan, *et al's* (1997) study of the international auto-industry indicated that within the automobile industry national skills strategies and traditions have effected the process of skill formation. To support that theme they reference the long established vocational training and apprenticeship in German car manufacturing sector, less state and Union regulation and the importance of continuous on-the-job training in the Japanese car industry, fewer apprenticeship and long term vocational training in Italy, the uneven and highly decentralised systems of industrial relations in the USA and Canada, and finally State, Unions and Employers Agreement on Vehicle Industry Certificate (VIC) through formal training on the job in the Australian automobile

industry. It appears that Rover Group and particularly Swindon Body and Pressing's approaches to skill formation are not only positively affected by Honda and BMW but also strongly influenced by the national tradition of education and skill development.

In managing these changes the Japanese and German systems of skill development had an impact over the restructuring of the Rover skill formation system. The Rover Personnel Manager pointed that:

"On a fairly simple level, clearly there were large numbers of people over a long period of time who had some contact and direct involvement in visiting Japanese assemblies, so there were obviously skill benefits out of that. But probably much more significant than that is what it drove us to do for ourselves in the area of TQ, and out of that a general understanding of technology principles and then a lot of focus on training in specific technique, process and process management. "

But the Managing Director of the Swindon plant also observed that:

"We were brought face to face with the gap between the Japanese manufacturing industry and the UK and we recognised that we had to invest a lot in this kind of process thinking and the total quality ethos and so on . I don't feel that restructuring of training in our company was influenced by the Japanese. We recognised there was a big gap to be covered here and we had to think hard about how we were going to set about doing that. So our investment in training and development of this process knowledge within the business had a tremendous amount of effort put into it.... that's significant and that's why the conversation in terms of development of people very much on the action just now. What we got from Honda was that we need to look at process, you draw people out so that they understand what happens before they get it and after they get it and therefore we were doing lots of process learning across the breadth of our business and probably we spent too long in that mode because we were confronted with German industry and we realised too that in German industry they have people with lots of expertise, really deep knowledge about metal forming and

you drill right down into the total technical of metal forming, in perhaps quite junior management positions. ."

When asked how they are going about addressing getting the greater depth and whether that being done with BMW or on their own, Swindon plant director said that:

"First of all there's not been any massive import of training or skill development infrastructure from Germany. There has been strong encouragement and saying " look you don't have enough people and you are missing out in terms of business, the quality of product, technical expertise, the competency of the quality of the product is not high enough" therefore you need to do something about it. So we got a strong leadership thrust. In terms of the delivery of that, once again we are turning our minds as to how we are structurally organised to do that. We have got some exchanges, so we've got an understanding of what the issue is. Its more about getting people to understand what the issue is, what the gap is and what needs to be done. "

The Swindon Body and Pressing managers pointed out that through this coalition with outside partners, and visiting Japanese and Germany factories they realised there is a big gap in their patterns of skill development. This information made them think about the new ways of restructuring their process of workers learning and training. Rover's collaboration with Japanese factories and now BMW have had a significant influence in terms of skills development and training.

### 8.3 Rover Training Policy

Within the Swindon plant there are three schemes - Engineering, Technicians and Business apprenticeships, with particular types of training for the three schemes.

*Engineering Apprenticeships:* this scheme takes four years and develops apprentices for " Product Engineers and "Manufacturing Engineers". Product Engineers are

responsible for the vehicle and its components, whereas Manufacturing Engineers are responsible for designing, installing and commissioning the equipment used to produce Rover Group Products. These process also involve skilled toolmakers who manufacture component prototypes for the vehicles, and the jigs and fixtures required in the manufacturing process. Trained in Electro/mechanical disciplines, they maintain systems such as hydraulics, pneumatics and programmable logic controllers. Other skills include fabrication and vehicle maintenance as well skills commonly required by the company. These are examples of the types of work that Engineering Apprentices are involved with.

*Technician Apprenticeships:* Four years in duration manufacturing trainees develop a range of skills including welding and fabrication, paint, trim and final assembly and apply these skills in the areas where cars and off road vehicles are produced.

*Business Apprenticeships:* Four years in duration business trainees will work in areas which support the engineering and manufacturing functions, such as purchasing, logistics, personnel and finance.

The activities of training school have changed over the last years. One of the trainers of Swindon Body and Pressing Plant said that:

"I joined this company in 1988, ten years ago, It is still quite a similar system. Our training was different to now. I did not do NVQ but skills, which were not based on competencies like NVQ. I would say most aspects of training are shadowing and observing people. How much has training changed? Courses are basically the same, first year in training school and then go to the shopfloor. The theory side has

changed slightly, more paper work involved with NVQ, because when I did training it was only assessed by the training officer at the end, but I am not sure which one is better. During these years obviously technology has changed. We have machines which would not have been here a while ago.( 2-Engineering Trainer). "

The Fordist production system divided labour not only in the factory, but also in the engineering shop. Some industrial engineers specialised in assembly operations, others in the case of the dedicated machines making individual parts. Some manufacturing engineers specialised in the design of assembly hardware, others designed the specific machines for each special part. Some product engineers specialised in engines, others in bodies, and still others in suspensions or electrical systems. These original 'knowledge workers', individuals who manipulated ideas and information, rarely touched an actual car or even entered the factory (Womack, *et al.*, 1990). A look at the Rover apprentices' points of view indicates that in their training the system of learning has changed dramatically.

"I came here after finishing my A levels from school . I had not any experience of engineering. We had several interviews then a week's introduction course which involves team building. We split up in two main groups, one group doing something while another group works with the machines, and then swap to get overall knowledge . It took six months. During the first year we went to college as well and had courses on engineering like C&G part 1, it gave me an overall understanding of my career. After that they sent us to the shopfloor in the second year and had six week training in different parts of the factory like the Press-shop, and we did NVQ which helped us to understand the manufacturing process. It was quite good actually, the point here is before they sent us to the shopfloor we had received training( mostly theory) through college and on the shopfloor we were taught basic knowledge. People on shopfloor are really good and helpful (10-Engineering Apprentice). "

"...we trained on every single section. On the shopfloor now we take basic skills a bit further. We move from section to section to pick up knowledge on the way (8-Technician Apprentice). "

"...first we came to the training school where I did six to eight months electrical workshop. In the first year mostly electrical training for myself then we did fitness in mechanical which helped us. First year four days at training school and one day[engineering] in college and this one day in college and four days in training school, continues until when the apprenticeship is finished (9-Ex-Engineering Apprentice). "

In the case of the Business Apprenticeship they will attend college on a day or block release and will be expected to attain NVQ level 3 in Administration. The academic work is combined with a broad range of relevant practical work experience.

"... it is my second year , I am here in the office which is part of my training. Here I learn mostly by practice about my career (2- Business Apprentice). "

Comparing the evidence and comments on the Fordist model of training system it seems Rover train their apprentices in a more flexible way within a framework of multi-skilling. Amongst the apprentices and trainers there was strong positive support for the overall approach of the apprenticeship. As table 8.1 shows 29 apprentices, 9 ex-apprentices, and 3 trainers valued merging theory and practice; 27 apprentices, 6 ex-apprentices, and 3 trainers were positive because of Rover's training school system; 23 apprentices, 5 ex-apprentices, and 3 trainers mentioned positively the facilities and equipment at Rover; 19 apprentices, 4 ex-apprentices, and 3 trainers mentioned the opportunity of going to higher education; 12 apprentices, 3 ex-apprentices, and 3 trainers mentioned a day off in college; 6 apprentices, 3 ex-



apprentices, and 3 trainers cited good trainers and finally 4 apprentices, 1 ex-apprentices, and 2 trainers cited the nature of the course evaluation<sup>i</sup>.

Aspect of Apprenticeship	Apprentices N=30	Ex-apprentices N=9	Trainers N=3
Merging theory and practice	29	9	3
Rover Training school facilities and equipment	27	6	3
Shopfloor training	23	5	3
Chance going to higher degree	19	4	3
Day off in college	12	3	3
Good trainers	6	3	3
Continuing assessment	4	1	2

Table 8-1: Important aspects of Swindon Body and Pressing plant apprenticeship Schemes

### 8.3.1 Merging Theory and Practice

There was a wide agreement between apprentices, ex-apprentices, trainers and managers for the merging of theory and practice. Since post-Fordist organisations emphasise links between manual and mental, theory and practice the essence of competency learning is the link between theory and practice. With an increasing emphasis in situating theory within the context of practice on the shopfloor, this

<sup>i</sup> The quantitative data extracted from interviews based on the following question "What are the most important aspects and the key issues of training you receive?"

facilitates learning for apprentices to better understand the significance and application of their skills. They will also realise the importance of mental and manual aspects in doing a job.

"We spend three months on the shopfloor, where you get to learn all about the area and different machines you work with (6-Ex-Engineering Apprentice). "

The Swindon Body and Pressing skills policy aims at providing both organised learning through the formal apprentices schemes and tacit skills or continuing learning via working on the shopfloor in a particular team or zone. Rover trainers stated that learning and quality of learning doesn't happen, unless there was considerable effort from the people involved. Ex-Engineering Apprentices claimed that most of the workers on the shopfloor believe that the reality of learning and understanding comes from watching and training on the shopfloor. Because when people go to work and get responsibilities, this commitment to work forces them to learn and always improve their knowledge

The Management of the Vocational Training School is always looking to find better ways of improving the quality of apprenticeships. One of the trainers pointed out that:

"...compared to the training I had received I would say in my training there was a day and half in college, gaining some theory, but it was not tied in very well with what you actually did back at work, so you might go to the college and have some theory about something, which is different to the work you do. It didn't really tie with practice, but on the shopfloor mostly that was practical. This Apprenticeship has

changed this relationship and all courses and training match very well with the needs of workers, and the Rover Group (2-Trainer). "

Apprentices are expected to go through the same process of theory and practice training irrespective of their background. In this respect one of the Swindon Body and Pressing school trainers said that:

" some of them may come with A level, we could even have them come with a degree already but the thing is in terms of training we start engineering at the basic level. The only time we identify somebody and say they do not need to come to this basic level, they have the background. The only time we would do that is when we consider that our apprentices have done NVQ. Because otherwise they need to go back to engineering to get NVQ. We can not just say he/she is clever and send them off. ... a lot of our apprentices coming here from school, college, they have a little knowledge about engineering. So we can not rush them in with say " this is factory, this is machine, this is engineering." ..... we have to go from the foundation up. The actual training is on going on the shopfloor the people on the shopfloor are responsible for training. For example we have a trainee, who goes to train on a building, he see the building, if he needs a particular skill, people on that building are responsible to train them up, What I would say is Its not just us, we provide the foundation here, the shopfloor then provide the actual growing and training in the actual skill. (1- Trainer)"

The training school will help apprentices step by step get familiar with the concepts of key skills and relevant academic knowledge.

" We did a week away of team-building, work with others, IT and communication. At college we really done too much on how to work with each other in terms of ways of supporting and helping people at work. We also have team meeting, we had a chance where after one week to talk to other mates and our trainer about what's happened during the week. Trainers came up and we discuss our problem with them (6-Technician Apprentice). "

Whilst apprentices appreciate the reasonable amount of time given to monitor their progress, they mentioned that they have enough time to work independently using skills and acquiring more.

"Training tells you where you need to go, we work in different areas and gain knowledge in electrical, maintenance tool making (10-Engineering Apprentice). "

"When we came here we had general knowledge but in college and here we are taught new experiences and understanding which we never thought. The depth of courses and lots of literature opened up new routes for us (13-Engineering Apprentice). "

Apprentices liked the training method of learning with somebody skilled near them: trainers at training school and a skilled man and team leader on the shop floor. This, makes an integrated teaching and learning experience.

" The Key issue of our apprenticeship is that you can learn theory and practice together. In day release in college I am learning theory and here I do my career. Another point I can apply this to other jobs outside of Rover Group (9-Technician Apprentice). "

"We are taught basic principles of engineering. Going to the shopfloor and learning by doing (1-Engineering Apprentice). "

" I develop my machine skills on the shopfloor and training school (8-Technician Apprentice). "

"When I started here, my electrical knowledge was very limited, since I concentrated on that I have grown my electrical knowledge, quite reasonably it was very useful because the machines we work on that now is a lot of CNC (6-Engineering Apprentice). "

"We did a lot of work in college and the shopfloor. I mean theory and practice side are important parts of this apprenticeship.(6-Technician Apprentice)".

"Combining practice and theory and taking apprentices around the company (7-Ex-Apprentice). "

"What I found when we started my apprenticeship, the training schools took into account our academic background during the teaching and learning, they didn't push us to learning. We are trained based on the training package which is really well developed (1-Technician Apprentice). "

The findings indicate that trainers and apprentices felt strongly that they are getting a good and useful training. According to trainers and apprentices, their training is strongly linked to the Rover Groups targets and ethos. A key element in integrating theory and practice is the time spent at college. The reasons for sending apprentices to college are stated by the trainers.

"We are being realistic here, we can not cover as much as we would like to. It is not possible first to cover absolutely everything. So they go to the college and we do practical work here. The college backup what we teach them by giving them theory ( 1-Trainer). "

"To improve the skill of our workers we need to send them to college. Obviously in the future we might bring back our students from college and train them here. (3-Trainer). "

There are however, two distinguishable necessary, inseparable components for skill formation, organised or codified and tacit or unorganised (Hayek, 1945), explicit and implicit (Polanyi, 1966) skill learning. Japanese production systems recognised this in the philosophy of Kaizen or continuous shopfloor led improvement (Hendry,1995). It seems Rover based on the "New Deal" policy has tried to merge theory and practice, mental and manual in the processes of apprentices' skill development. Rover apprentices believed that their courses make them flexible workers. They can find errors or flaws in others' work. They better understand the whole map of how the

organisation works and how they fit into it. They have enough competency to apply their knowledge on the shopfloor. Workers are encouraged to enhance their skills and competencies through schemes such as the “Open Learning Centre” which helps to create interest in continuous learning and flexibility. But that alone is not enough to generate a true learning organisation. Rover also considers flexibility from other perspectives. To prepare people who can work across departmental lines and functions they must cover skills in many aspects of business. They must be easily adaptable to teamwork and team participation. In following this policy perhaps through learning theory and practice together, day release in college, time on the shopfloor, and learning by doing in all the main area and on different machine, apprentices are prepared to be more flexible.

Although there were positive attitudes toward the Rover training policy in merging theory and practice, some of the apprentices believed that the theory developed in college was not helpful.

“...all the training in college is useless, really for us, and I never used the theory at all. All I learned about tool design was from the job and other people on the shopfloor, and doing the work, study by myself. I mean you go to college and learn science, maths and you do industrial studies, computer in manufacturing (COM) some of it is relevant but most of it is not (12-Engineering Apprentice)”.

“...to be honest with you, I supposed Rover believed we need to know more theory, but on the shopfloor theory courses are irrelevant. Because here we use new tools, new technology (3-Technician Apprentice)”.

“I am more likely to learn from people on the shopfloor than at the college (2- Engineering Apprentice). ”

This lack of application of theory may be related to the kinds of routine and repeated jobs which workers were doing on the shopfloor. On the other hand, we have already discussed in chapter six that Rover's workers in the shopfloor rotate less around the jobs available thus the nature of the job may not be challenging enough to involve workers mentally in terms of planning, designing and implementing, therefore the theory is not relevant for them.

### 8.3.2 Trainers and Apprentices relationships

Designing training as a vehicle to forge a two way relationship between apprentices and trainers helps to smooth relationships and communicate knowledge and work related attitudes. Using ways to motivate apprentices individually and in groups facilitates the process of learning skills. With regard to apprentices entry qualifications, training school tries to help those apprentices who have difficulties with some of the courses. From the start they work with each other and the training is organised so that every body feels it is necessary to learn and it is his/her responsibility to help other trainees to learn. In emphasising working together they enable apprentices to learn from each other.

“In a sense trainers do not force you to do a job, but they help you to do something based on your ability (7-Technician Apprentice). ”

“When you work with others as a team, you can get and understand knowledge which is necessary for your career. Particularly the way

which Rover delivers courses here and at college it does help to you to learn, of course if you are keen and interested, otherwise yes it is difficult to learn. (2 -Engineer Apprentice)”.

“During the interview and with regard to apprentices’ entry qualifications training school helped us. They also all the time emphasised working together which helped apprentices with different backgrounds to share their experience. This situation provides an environment which helped apprentices to pick up general and specific knowledge of key skills and other courses (1-Engineering Apprentice). ”

“I found the training very good, as you start you gently go through the scope of work and as your skills develop you move down on the shopfloor. The only area I found which could have done with some more investment was mechanical work because you learn how to do filling and cutting but it does not actually preparing you. The electrical area is very good , you learn how to fill, cut and find faults but it was not the same as the fitting side.(6-Ex-apprentice engineering). ”

Interviewees have said that their communication practice will help them ask about whatever they do not know which is necessary to understand and learn more .

Rover motivates apprentices through giving them more opportunity to express their ideas and capabilities and direct participation in their process of training. At college they operate a committee, two people from each class meet the principal of the college and discuss their problems. Performance related pay is another mechanism used to motivate and involve apprentices in the process of learning.

“Our trainers are always trying to make better apprentices, and they work hard. In the case of motivation towards doing a better job we can mention “ pay rise”. The company gets every March, a report from the college and a report from the Rover manager assessment. If they aren’t succeeding they hold your pay rise for a few months, so this is an incentive to motivate students. (16-Engineer Apprentice)”.



“I can say yes, they are always trying to help us and direct us to learn skills. (6-Engineer Apprentice)”

“They are remarkable. They help you to make your own decisions, get involved your work and indirectly push and motivate you to train, and finally the shopfloor they are friendly (12-Engineer Apprentice). ”

“Yes all the trainers here and our tutor at college always try to help us to motivate us to make us interested. But you need to be motivated when you come here , so you can learn better to overcome your weakness (2 - Technician Apprentice)”.

One of the trainers believed that training is better now, because when he did his apprenticeship there was less motivation to help apprentices, they were seen as a pair of hands, rather than an investment in the future.

During the course, should apprentices get problems from the trainers there is a system the Associate Development Plan (ADP), where any employee has the chance to have a chat with the managers and team leaders to discuss their aspirations, where they are now and how to get to where they want to be.

Rover trainers all had an industry-specific background, and had moved up within their professional skills to take on responsibility for training of apprentices. Trainers were ex-apprentices and skilled workers whose training responsibilities related exclusively to the tasks and skills in which they had competence. In the training school, trainers were each responsible for the training which aimed to give apprentices specific skills and to learn how to do a particular task. Trainers decided how to transmit their skills,

explain or demonstrate them and informally judge the effectiveness of learning. They also spent time on apprentices' assessments of competence. Trainers worked as facilitators to help apprentices recognise their capability and get used to new situations.

### 8.3.3 Progress to Higher Education

Progression to higher education is another key issue which was mentioned by most of the apprentices and trainers. Industry is recognising that the associate degree is a necessity in high technology fields. Innovative practices link businesses with community colleges, allowing apprentices to gain basic job skills and a higher education. In this way the Rover Group has formed close links with local universities, colleges and schools looking to provide effective learning whether it be in the classroom or on the shopfloor.

The issue of progression towards a degree is worthy of special note. The Rover Group, with their commitment to a seamless process of development enable apprentices to take advantage and maximise their potential, which could be a degree and eventual membership of a professional body. The apprentices were influenced by higher education progression opportunities, which impact upon their motivation and satisfaction with the Rover Group company, and almost all of the interviewees were interested in acquiring a degree. While in principle this is open to all one trainer admitted that those who come to Rover Group with a background of A-Level or College level stand the best chance of successes.

“There is no restriction if you have potential you can go, I mean by potential usually you have to get to a standard, having A-level or HNC before coming to Rover. So the next step is a degree. Obviously 16 year old students who come straight from school and have GCSE can not go to a degree. Generally the apprenticeship has enough flexibility and it mostly depends on individuals rather than the Rover Group (2-Trainer). ”

Nevertheless, showing potential and effort during the apprenticeship is very important to get this chance and the percentage of apprentices who achieved the transition to higher education is variable.

“They really all have the opportunities to go to higher education. They can all go to university and work towards degree . Before they start we would say 100 % but being realistic, I would probably say if you look at the number of technicians we have going for a degree we expect this year for example about 40 % of them going toward higher education (1- Trainer). ”

“About 25 % of students are going toward a degree (3-Trainer). ”

#### 8.3.4 Assessment

As an NVQ recognised centre the assessment and judgements about the competencies and standards on the NVQ courses are made by Rover specialists. The Manager of skill development enlarged upon this;

"...but the way the NVQ's work is that you have your own assessors, you do your own assessing and if you're a big company like us you have your internal verifiers, who would normally be training staff. So we have assessors out in the patch and we have to verify those assessment decisions. You're supposed to see 10% of the way that assessments are made and then the internal verifier does that and then he submits periodically to the board officers - because you're registered the board officers come in and externally verify. They externally verify

the internal verifiers, so the lead board, the body, have external verifiers. The internal verifiers come in to see me and I say 'What have you done?' and I'll say 'Here's my internal verifier' and they'll spend the day with them and say 'Let's see your evidence. How many assessments have you seen? What's your training programme? How are your assessors briefed? They have a huge menu, they're like an inspectorate and they work with you on some issues, but by and large they're checking to ensure that you meet the national requirements. So periodically we get the NCVQ, which is now the QCA, who come in as well to audit as well. So we get audited to death basically. "

Skill development managers and trainers claim a training level and quality within Rover which is higher than the NVQ. The Managing Director of Rover Body and Pressings said that:

" ...it seems to me that the biggest value, or equal value at least, is the assessment and so much of the NVQ process is about assessing, using and working to that skill in the workplace. That really has a big attraction to us in terms of the NVQ process and structure. So many times you deliver training and people actively apply what they've learned and now NVQ accreditation is about that, about being assessed in the workplace and actually delivering and using it. If you're not doing that then you can't be accredited. That has a big attraction to us. Of course we want to give people recognition and we want to understand where we are as a measure as to the competence of our people, but the assessment process linked behind that is very important to us. And it just puts an edge on it in terms of the accreditation material, the assessment process."

Rover Group has established their schemes so that people go to the workplace and utilise their theory and practice. The Skill development Manager also commented that:

"...we do have the possibility of developing young people's skills and we have very few failures and a lot of successes. . . . taking if you like age for age, here's someone who's been to college and done their degree and they come and join us and then you get someone who's been through our apprenticeship programme and done a degree, then

look at the usefulness of those people in an engineering organisation and there is no doubt which is the more powerful and more competent individual . "

Based on this policy they receive information from the shopfloor to assess the degree to which apprentices reached their training targets. What they do is a mixed method of formal and informal assessment. They send appraisal forms to check progress. Also, they ask training officers to send out review sheets, which are completed by apprentices, reviewing all aspects of the training. One of the trainers explains Rover Group methods as follow:

"the apprentices go to the shopfloor in the second year. We do a conversation with the people on the shopfloor. The skill people who work with our apprentices. Get trainees to come over, ask them questions. Skill persons might be thinking perhaps he/she should know about that. So the process is done informally really, but we are trying to tidy up how we do things here and improve the way we do that. (1-Trainer)"

One of the ex-apprentices believed that during the apprenticeship they can not train people to be multiskilled, because of time, and student motivation. In theory, they learn this on the shopfloor.

Trainers were asked what evidence was available that this training is effective? They replied that apprentices came here with few applied skills and very little knowledge of key skills, but through the four years training they improve their knowledge, and a number of appraisal evidences which indicate they have made good progress. But one of the - engineering trainers argued that:

" whatever our student learn at training school and college is really useful for them and helpful at shopfloor. Only trouble is maths which

is used occasionally so it is easy to forget if you do not practice all the time (2-Trainer)."

Perhaps here we may distinguish two different ideas which were mentioned by respondents. First the value of training and second the utilisation of training. Although there was agreement on the value of training by apprentices, ex-apprentices did not think they utilised their theoretical skills after finishing the apprenticeship scheme. This issue might be explained by considering terms such as multiskilling and multi-tasking. Our observations and interviews with ex-apprentices shows that it seems the Swindon Body and Pressing plant developed their apprentices as multiskilled. But after graduation on the shopfloor in teams they engaged in multi-tasking. More precisely apprentices utilised their competence and ability in doing a few recognised tasks and in a given team and zone area.

#### 8.3.5 School Training Facilities

Interviewees expressed that Rover's investment in terms of time, money and resources on training is remarkable. They were happy with the large amount of money that the Swindon Body and Pressing training school spent on training particularly with the equipment which they thought excellent.

Based on the new arrangement for apprenticeships, in the light of financing and funding apprenticeship schemes, Rover Group skill development managers have to contract with TEC's every year about the number of modern apprentices they want to

employ. The Manager of skill development commented on the changes over the years:

"...under the old scheme when I first joined it was time serving, so 21, the next step was minimum 4 to 5 years, but you could complete in less if you'd met the two modules, but you had to be aged 20, so there was still an age commitment there. Under the segment system that was still the same, 4 to 5 years. Under the new Modern Apprenticeship they say there's no time constraint. In some industry sectors you can complete an apprenticeship in less than three years. In engineering generally we would say it's a minimum of four years before people are signed off, because they have to be assessed, be verified, complete the training."

The TEC's paying £500 for each of the apprentices, required yearly and give a signing on fee. The TEC will pay another £2,000 per head at NVQ level two for 70 weeks and then when they achieve their NVQ level 3 they will pay £3,000, so altogether the training school receive £5,500 per head over the period. The manager of Training School claims that this is not a reasonable amount of money relative to real costs. When considering instructor fees, college fees, equipment and so on they reckon it costs about £15 - 16,000 to train every apprentice. He stated that in spite of this high costs the Swindon plant is still determined to invest in young people.

However, what is noticeable all the evidence so far suggests Rover is a post-Fordist organisation, we now need to consider the role of key skills and production. Despite the rhetoric surrounding key skills one of the interesting things about Rover is that there appears little agreement among managers, trainers, apprentices and ex-apprentices about their nature and importance, it is to this issue we now turn.

#### 8.4 Imparting key skills?

Post-Fordist organisations emphasise key skills including teamwork, problem solving, communication and personal development. It is assumed that the success of company strategies depends partly on the level of development of key skills among employees, believing that key skills provide the ability and potential for workers to move easily from one task to another. But introducing key skills raises various questions, in particular whether key skills are organisation and occupation specific. The answer to this issue makes clear whether key skills can be transferred from one domain to other. How do Rover teach key skills for their organisation?

Rover's modern apprenticeships aim to offer integrated off-the-job and on-the-job training through the training school to produce a variety of outcomes including career specific competence, a range of specific and contextual knowledge and understanding of key skills, including other items of added value, such as the capacity of learners to manage their own learning for their future careers. All Engineering and Technicians apprentices go through selection after the induction process. The first week of training is about company induction which covers:

Rover Group as a whole;

Health and Safety;

A Training plan for four years.

This short course training introduces apprentices into the company, its culture, regulations, and rules. The second week focuses on key skills and apprentices get a



flavour of key skills such as teamwork, communication and problem solving. Based upon the Rover policy, all employees need to speak clearly and concisely when expressing their views and ideas, produce written material that is structured and concise, be prepared to listen and learn from the experience of people around, making effective relationships with fellow workers, setting themselves personal targets and have a realistic awareness of personal capabilities. In doing so, in the training apprentices are engaged in activities like "caving, climbing, rope racing and sailing". The main two key skills are teamwork and communication. For team building, a process in which a work group examines how it is currently operating, the group identifies how it could improve its effectiveness, and implements the procedures and processes that enable it to get the job done in the best possible way. In following this policy, the apprentices focus on how teamwork can impact positively in accomplishing its tasks. They define their roles in improving the quality of service/products that the company provides, and they build teamwork skills. They work on key skills when they come back to school training and day release at college.

In the Engineering apprenticeship area when apprentices first arrive, they are split up into three teams, which involve electrical technician, mechanical technician, and fitting technician. Apprentices spend about three and half months on electrical then move to mechanical and then to fitting. So all apprentices regardless of where they ultimately go, whether to tool making, electrical, mechanical or maintenance all going through the same training in the first year. It leads to NVQ level two and finally level three. Rover trainers believe this is a flexible way of skill development, but Rover Group

managers and trainers claim not to train apprentices to NVQ standard, but to the Rover Group standard, which is based on two fundamental perspectives; foundation of NVQ and requirement of Rover Group.

Interviewees explained how and what apprentices learn in terms of key skills.

"College covers the application of number and communication. In the Open Learning Centre which is located in Rover and has facilities like Numeracy and Computer skills, anybody working at Rover can come and go and through courses, anything from speaking German, Project Management, we send Apprenticeship over there to train on IT. (1-Trainer)."

"On communication we work on project presentation in front of the other students which actually the first year are strangers to us. In a situation with limited time -at least 10 minute you have to do your presentation so to be understandable to everybody ( 2-Engineering Apprentice)."

"We learn different programmes about IT such as Excel, word, how to use computer ( 8-Engineering Apprentice). "

"We were told about all communication which happens at Rover in the first introduction courses. We had training on team-building both theory and practice in college in the second year which we did C&G part 2 . This training helped us to expand previous courses and goes a lot more in depth. As well we received training on IT, Total Quality Control, and sort of things.(7-Technician Apprentice) "

"In the first year at second week in training school they concentrate on team-work, communication, problem-solving and work with others. They give you tasks which you have to work together as a team to solve. One of the tasks was a "rope race". We had to get points in a teamworking way, and then with these points you can buy equipment and as a team you had to built a rope and every body has to get involved in sailing rope. It was like a game but what you trying to do at the end is work as a team to build up a rope as best you could and work together to sale it. Since we had been here we had to do

presentation, which is part of NVQ, you have to talk with people you do not know and area which you do not know about (13-Engineering Apprentice). ”

“First year you have to do ten minutes presentation on a new subject to a new group . It could be anything like holiday, hobbies. We have to do it about subjects we do not know with people you do not know. We had a course on teamwork. We had whole week activities and you can really see how people reacted. (6-Technician Apprentice) ”

"We did IT at college it was as part of our Key skills. At college we work on software packages, word, excel, data bases, gather information and collecting data and producing documents at the end (5-Technician Apprentice). "

" you definitely learn new methods to do things. We learn skills which are needed by a lot of industry around.(12- Engineering Apprentice). "

Rover Personnel Manager in response to the level of apprentices and key skills competency of apprentices said that:

"There has been a gap until relatively recently between theory and how they were managed in practice, but we're addressing that at the training school. People take it in turns at leadership/simple skills of communication- and that's very much part of the training. "

During the apprenticeship through the college courses and shopfloor practice they learn the concepts of key skills. Arguably, it is teaching transferring skills that is central to how key skills can be adapted across organisations. However, another related view is that we need to make a distinction between organisation specific and generic skills. The point here is that generic key skills may be taught by keying in students to the issues, questions and techniques involved in exercising key skills in specific context. It is a way of generating a set of expectations in students about how they will need to adapt to specific workplaces. In this sense generic skills will be one

aspect of Bridges's notion of transferring skills. In turn these ideas raise the possibility that key skills can be taught outside the specific context of the organisation.

In learning key skills Rover Training School uses situated learning which emphasises formal and tacit learning and training. We have already discussed that situated learning was introduced by Vygotsky(1978), Brown, *et al.*,(1989), Collins, *et al.*,(1989), Farnham-Diggory (1992), Lave and Wenger (1991), Stazs, *et al.*, (1990, 1995), RAND (1996), Cotton, *et al.*, (1993-1994). In terms of these key skills which are taught by Further Education colleges these are general and transferable across industries, because colleges teach according to the criteria of NVQ programmes. In contrast that part of key skills training which takes place in the shopfloor is specific to the company and its ethos. Rover seems to teach the same concepts of key skills like teamwork, communication and problem solving in its apprenticeship schemes on the shop floor.

However, in learning the formal training of key skill to the FE colleges it is quite possible that trainers and apprentices can simply see key skill training as a "Bolt on" extra to satisfy NVQ requirements rather than being important to the production process. This then raises the question of the role of key skills in the organisation.

### 8.5 Role of key skills

It could be hypothesised that key skills will be used in different ways in the different types of economic development. The rhetoric of key skills raises a further set of issues about whether they are being used as mechanisms of control, surveillance and screening or whether they are part of an indispensable package which enables greater autonomy, learning and skill development. More specifically, that in a neo-Fordist organisation they may be used primarily for purposes of selection, and social control. This is because in such an organisation the aim is to be competitive by cutting costs rather than competing by producing quality goods. Hence what is required of workers is compliance rather than initiative. In a 'post-Fordist' organisation the emphasis will shift more towards a concern with harnessing key skills to quality production. Here initiative and the ability to make sound decisions and judgements as part of a team will be crucial. So the ability to communicate well and problem solve in co-operation with others is also important in a way in which it is less so in a neo-Fordist organisation. On the other hand we can hypothesise that there will be a continuum in the way key skills are used. This continuum is a matter of emphasis in Rover. Indeed, while key skills are emphasised at the entry level their value in the long run is not clear.

What is observed in the Swindon plant is an indeterminacy in terms of key skills, because there was disagreement and conflicting ideas among managers, trainers,

apprentices and ex-apprentices about the role and importance of key skills in recruitment on the shopfloor and in adding to productivity.

In regard to the importance of key skills respondents placed value on three main reasons for learning key skills: a) Competition, b) Flexibility, the changing organisation of work and TQM, and c) Uncertainty of the labour market and productivity.

#### 8.5.1 Competition

Apprentices mentioned the ways they were taught is important to speed up apprentices in terms of the Rover Groups position in international competition;

"If Rover are to be competitive, they need these skills. I say without developing these key skill it is very difficult to be competitive with other companies . (1-Technician Apprentice)"

The Managing Director, in discussing the importance of so called soft skills-teamwork/communication in the training they offer said that:

"There's talk about total quality leadership, that's a bit about making sure we don't lose the openness to process thinking that we really got from the Japanese. We really don't want to lose that because that was an important learning for us, getting people engaged in process improvement, learning about the process, leading and motivating others, getting the best out of people, tapping into people's knowledge that they keep bottled up. It's really important to us and we don't want to lose that. "

In fact, the intensification of international competition made Rover look for new competitive advantages in order to preserve the present markets and expand into other markets and productivity. In this way the above respondents believed that key skills can help the workforce to be involved in teamwork and raise production.

#### 8.5.2 Flexibility and the changing organisation of work

Apprentices mentioned that key skills make apprentices more confident; acting effectively on the shopfloor and;

"It help you to be confident at work, it teaches you to work with people whether you like or dislike them. (2 -Business apprentice)"

"I think every thing has changed and this needs new forms of training and new skills (5-Ex-Apprentice). "

"To make the company speed up production, maximise efficiency, if every body works with each other , the jobs done quicker and saves a lot of money. (6-Ex-Apprentice). "

"Rover needs this skill, because they want to produce better products and facilitate the work. And also in your career you need these skills (1-Business Apprentice). "

"Well, I found the company which I worked for before coming to Rover, never had anything like this and a lot of people worked individually so they struggled on their own and they did not work quick enough, but when you work together the jobs are done very quickly (4-Technicain apprentice). "

Three of the apprentices and one of the ex-apprentices said that they worked in a group, for which they needed to learn team building, because company jobs,

compared to years back, have changed and they were not working on their own. They said that they have to help and get help from other people. Through teamwork more ideas came to them, enabling them to do their jobs so quickly without feeling bored.

Trainers emphasised the importance of the changing nature of work and jobs, emerging new technology, and preparing apprentices for being qualified in the Modern Apprenticeship.

"Any job has changed. If you look at Rover it is not just about engineering, we can train them but in the past it was just working toward engineering. The modern world now is not just about that. It is changing in terms of technology. We need to bring every body not just our apprentices up to speed. With these sort of skills and training we bring them up to speed as people not just as engineers ( 1-Engineering Trainer). "

The Skill Development Manager in considering the importance of key skills believed that at a higher level apprentices have to make official presentations. Apprentices usually need to use numeracy and the level demanded in Swindon Body and Pressing plant is high. In terms of teamwork and working with others, apprentices have to demonstrate that they've taken the lead in some situations and that, they've been making contributions as part of a team. Manager of Training School that;

"...when I finished my apprenticeship I was expected to be able to communicate with people. If I got a design from someone or if I was doing a design then I had to do my own number crunching and work out all the angles, lengths, these sorts of things and dimensions and things like that from a given specification. I would say the most significant difference in key skills for engineering now is about learning



it[key skills], developing and improving your own learning and performance. These soft skills never came into my apprenticeship. You were trained to do a job and you got on and did it. Improving learning performance? What the hell was that? Problem solving? Well everyone does that anyway don't they. These are formal training actions to show people, so that's different. "

Indeed this means that Rover and the TEC's have tried to formalise key skills to make it more apparent and observable for employees. He also believed that key skills were needed because production has changed, lean manufacturing, means there are fewer and fewer people involved, more and more quick decisions to be made, hence communications are more important.

When one of the Rover shopfloor managers was asked about the importance of team building and problem solving skills in work . He said :

"we really needs these skills, because we have teams which have regular sessions every week or month which will discuss the progress and problem they had, so all our workers and manager should learn these skills ".

### 8.5.3 Uncertainty over the labour market

The uncertainty of the labour market is a crucial aspect of organisational change. Clearly, utilising new technology and machinery in different ways has created flexibility, and changed the face of jobs and skills in a post-Fordist system .

Apprentices stated that key skills prepared them for unknown situations.

"We do key skills everyday, it is hard to prove it on paper, if you walk around the office with the assessor and you can say yes he is doing

that, now with this interview we doing a key skill talking with someone who we don't know. Generally Rover is going to prepare workers for unknown situations and help people to understand each other and then get profit from it (9-Engineer Apprentice). "

However, not all apprentices were aware of why Rover insisted on key skills.

"I really do not know why they need, them that is a Rover Idea. They emphasised key skills which I think are not very important for my career. (11-Engineer Apprentice)"

One part of the apprenticeship scheme is related to key skills. Therefore all apprentices are required go through the module to qualify. Apprentices (n=3) and one of trainers pointed to this issue.

"...Rover managers are very strong on key skills. We had different courses. On the shopfloor I would say really IT is not of benefit that much honestly, because you are not involved with computers, rather you work with machines but for Rover teaching these skills is a chance to get further on and carry on to university, promotion in job that's what I am looking at. ( 10-Engineering Apprentice)"

#### 8.5.4 What key skills are more important in shopfloor production?

Managers, apprentices and trainers have different ideas about the value of individual key skills such as communication, information technology and teamwork. Trainers believed that key skills, especially teamwork, are essential for the company. They argued that teamwork and communication are related to each other. In the light of the importance of key skills, the extent to which they make the job easier and more

flexible the findings are clearly mixed. Some of the trainers and apprentices have a the positive attitude toward the importance of key skills.

"When I did my training key skills were not around but I think what is in the key skills is good. We use all aspects of key skill at work. The key skills mostly used in the shopfloor is teamwork. The number in each team is dependent on the department. For instance in the Boiling house are 14 people which are chosen based on their willingness, qualifications, background, and mostly experience. I guess the importance of teamwork depends on where you do your work, but certainly on the shopfloor it helps, if you get a problem you can ask someone else to help you out (2-Engineering Trainer). "

"Communication is very important for our career. You need to talk and express your ideas( 2 -Business Apprentice)"

"Teamwork is useful, although we had training on teamwork but really I did not know too much about the teamwork but I suppose after a while working on the shopfloor you can see how the teamworks (12-Engineering Apprentice). "

"Among the key skills we think communication and IT are important, but in some section such as tool making it is not important. (14-Engineering Apprentice). "

"I think key skills are very important especially Teamwork and IT as things these days go through computers. I like to learn more in these areas (16-Engineering Apprentice). "

"Communication is very important. If you are too shy you are not going to find the information which you need to know from the people you working with. If you hide yourself in the corner, people feel you are not interested because you are not coming to question what exactly is needed(17-Engineering Apprentice)"

"...you need to know, so relevant information dose not pass you. At Rover we have team meetings and once, twice, a month, unless you are used to working as a team, when you coming to find it out, or coming to these meetings, if you can not put forward your points then certain areas are going to be a mess. So you need to work as a good

team to make the company work effectively (9-Technician Apprentice)."

Two of the third year apprentices pointed out that without teamwork you can not go to work. These key skills are now essential part of the work. You need to communicate with your mates who work as a team.

" Key skills are very important on the shopfloor. However, although key skills improve the job on the shopfloor, there are some of them which you have done training and gone to the shopfloor you never ever use them. For instance some of the IT, Application of Number, we don't need them too much on the shopfloor. Teamwork is important. (3-Engineering Trainer). "

Despite of a majority of apprentices having emphasised the importance of key skills in improving their career potential some of them were not interested in spending time on learning key skills at college or training school. Three of the ex- apprentices, expressed their dislike of key skills training. They believed that the relevance of key skills to work is weak and claimed that the time devoted to this area of work could have been better utilised on other activities. One of the Ex-Engineering Apprentices was asked how much learning key skills improved his work? He replied that:

" I do not think so, key skills actually are not helpful as much as Rover think. Everything in key skills you can learn in the shopfloor with little training. You can learn how to communicate, when to communicate, with whom to communicate. The only part of key skills which is important is IT which helps us. Without knowledge of key skills you can go to the shopfloor and do your work. In the case of teamwork it is the same, definitely when you go to the shopfloor you have to be a

member of a team, so they help you to know what's your responsibility and how to communicate with other people(3- Ex-Apprentices)."

" In my view the numeracy unit is a waste of time. In the first place when you apply for an apprenticeship for you need a certain grade in GCSE, maths. ( 6-Ex-Apprentice)."

" Key skills are not important as much as the specific training we received in engineering. (8-Ex-apprentice)."

"I think these skills except IT are not important for my career, It might be important for another career. Although communication is useful, but getting this job requires you to communicate which I think is not difficult for people (1- Business Apprentice)."

One of the Ex-Engineering apprentices who joined Rover Group five years ago after four years training school and one year in the tool room, also claimed his training in key skills had not been helpful, although it gave him a bit of general knowledge about IT, teamwork and communication. They have a team in their zone which are 13 people and they meet every month. He sees the responsibility of team leader as boring and a hassle and doesn't like to be a team leader. He believes that without a team they also can do the job . He also believes that people can come to the shopfloor and learn teamwork , communication and even IT easily.

" School did not give me enough key skills or preparation for work.. You know schools give you general knowledge and they can not prepare you for various careers, it is sufficient that they develop us fairly well in terms of general education. I mean if you are in an excellent school they still can not give you knowledge for different jobs like office work or engineering. But a mixture of training here with college is very useful. College compared to school treats student in a better. Key skills we have done here and college are really good but when it take a year to stretch out this sort of thing, it take our time we could have taken another course (12- Engineering Apprentice)."

Another ex-engineer apprentice who started six years ago with Rover with four years at training school and two years work in shopfloor also believed that learning teamwork is not necessary for his job. When new people come to the section someone explains the way things are done or through informal communication with others workers he claimed they can pick up the knowledge for doing the job. He once applied for the team leader position, but failed mostly because of inexperience, because the most important criterion for choosing a team leader is all round experience about the zone. He said although the concept of teamwork is new some of the older workers believe that they had this sort of teamwork before. They worked with each other, helped each other and discussed their own work problems. The only difference is that in the past people did a job for a long time but now they move around different jobs in a specific zone.

It seems to me part of this movement is related to safety and health problems, because if workers work with same machine or place for a long time they may get health problems. So they use teamwork and multi tasking to prevent these problems (Ex-Engineering Apprentice).

Interviewees also asserted that working under the system of teamwork, employees balance autonomy against peer pressure.

"Its a production environment and there is pressure on it, if you got a break down you have to fix it out as soon as possible as you can, if you get a problem you can ask your team to help you. Therefore there is enough autonomy at work but as I said under control of a teamleader (2-Ex-Apprentices)."

" we encourage and motivate them, except some cases which is rare the majority of people want to work in a team and consider it is important (3-Engineering Trainer). "

"If some one doesn't like to be a member of team, in maintenance engineering it is not too difficult, if you want to work on your own , you can do that, but in production areas, you have to work in a team. I am not sure what they do if you want to work on your own, but as I said it depends on the job and area you are working in(2-Trainer). "

This scepticism about teamwork among ex-apprentices is significant because they don't think key skills are relevant because of: a) firstly, key skills are organisational specific and only can be learnt in the shopfloor production rather than at schools or college; b) key skills may be related to issues of keeping job and promotion, as implied by the last quote. Hence social control factors are clearly an element so that employees learn them rapidly on the job.

The Rover Education partnership manager with reference to a session they had with Rover managers about the importance of key skills and how much Rover emphasised the necessity of training in them said;

" The managers said there were changes coming to industry and these change needed new skills and competencies. If students have not got key skills , they will not get a job with Rover. We are not going to take, and transfer all responsibility to the education system, we want to work with them collaboratively to meet our required skills. "

She added that the reason for this is that:

"...our managers' expectations are not the same as the key skills which are acquired in schools. Schools use and teach key skills which are different from industrial needs. In schools actually key skills are not taught properly. Sitting behind the desk and teaching key skills it is impossible to meet the needs of industry. In response to the Swindon Education Business Partnership Initiative Rover is determined to develop the key skills. "

With respect to the role of key skills the Rover group set up a meeting to develop an action Plan for Careers, Recruitment and the World of Work. This action plan was to enable young people to understand the requirements of industry into the 21st Century and be equipped to make the transition from full-time education into the workplace through the development of a range of real projects in which students, teachers and Rover associates could take an active part. However as shall be explained in chapter 9 this initiative proved to be a failure.

Nevertheless in a further interview the Rover Education Partnership Manager admitted that Rover is still unclear about what kind of key skills they need developing in schools.

" Key skills are very vague, what are the skills. We have got a debate like communication, teamwork, a whole list of different skills are required or claim they are required. When we talk to other companies, they say we think we need these skills. "

She did say that these issues have arisen since they started doing some work on the apprenticeship scheme, and Rover managers questioned both relevance of the criteria for key skills as derived by the NVQ because they did not fit in with Rover's production process and the relationship between the new apprenticeship and what



could be learned at school. She also commented on the experience of apprentices when they come to industry.

"It seems to me to be going back to doing as they are told. Do we still need key skills? We have got various levels of debate about what is actually needed. It is a huge debate about what kind of skills we actually need? They [managers] were coming around to looking much more at going back to the traditional skills".

She went on to say that senior managers wanted transferable skills. Key skills in NVQ, GNVQ tailored to the company skills which focus on creativity, taking responsibility, thinking skills. Whereas some trainers wanted to go back to what they knew best- training in the way they had been trained. For this reason younger trainers had recently been recruited from the shopfloor.

In terms of the reality of key skills on the shopfloor she said that::

" I think probably they need some of the old skills, not all of them. The old skills in terms of doing as they are told, I think quite a lot of people prefer to do things they are told but there is also a quite a lot of debate about whether some things trainees are taught are actually required.

The debate at Rover about the importance of key skills may not be unique. The same outcome have reported by Stasz (1997) and Dench, *et al* (1998). The view of the Rover management may be quite legitimate as expressed through the views of some of the apprentices and ex-apprentices i.e. they are looking to "over train" apprentices so that they can meet new and unexpected circumstances/technology etc, can solve problems which are unexpected and have a pool of trained talent available from which

they can promote the ex-apprentices, and the Rover management may be a function of the different ways in which they perceive the purposes of training. But for some ex-apprentices who have only experienced multi-tasking the significance of a essential training in key skills may not accord with their “reality”.

Conflicting evidence and indeterminacy in views of key skills at Rover are perhaps due to, firstly, the many take-overs of Rover leading to an unstable culture. For example although the Managing Director claimed that they had learnt about the importance of process skills from Honda, key skills were not incorporated into the apprenticeship until it was demanded by the “new modern apprenticeship”. Even then this formal training of key skills was largely “Bolted on” to the FE component of the apprenticeship.

Further evidence of the indeterminacy of key skills was that the Manager Director of Rover did not mentioned key skills issues until it was raised by the interviewer. This may be because the new owner, BMW, hold the view that the technical skills of Rover apprentices were not sufficiently developed and needed to be given priority<sup>i</sup>. Finally there appeared to be initial concern about whether the NVQ criteria for key skills could be applied to Rover’s processes. For these reasons it could be argued that the unstable company culture made it difficult to situate training for key skills. The company’s training process appeared to have changed due to its recent history which

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<sup>i</sup> Interview with the Human Resource Manager BMW by the High Skill Team

shopfloor practices had not moulded sufficiently to take advantage of them. The next point may follow from this.

Thirdly, in part, because the more key skills and initiative and autonomy they presuppose are emphasised the less management control there is over teams of workers- hence perhaps Rover Education Partnership Manager' point that they also need to learn to do as they are told. It is of course a plus for Rover that they are prepared to question and debate the role of the key skills in their organisation. Ultimately, short of observing the training of apprentices it is hard to determine the in-use practice as opposed to the espoused views of the trainers regarding key skills.

## 8.6 Conclusion

This chapter has examined four sets of claims about the process of skills development particularly key skills in Rover to find out whether it is a post-Fordist organisation, namely, the nature of skill development and training, the role of key skills, the social domain aspect of key skills and issues related to the teaching of key skills. Four results come out of the analysis. Firstly, Rover training school emphasises a process of on-the-job and off-the-job training, multiskilling, and the merging of theory and practice. The curriculum is not only focused on maths, science and technology but it also emphasised key skills such as teamwork, communication, problem solving, information technology and know how. And there is also the opportunity for apprentices to progress. Secondly, Rover teaches key skills in a situated context but

because of the methods of teaching through the college and shopfloor production they are in theory both specific to the company but applicable to other companies. Third, there is an element of control and surveillance through teamwork as well as empowering workers. Finally there was clearly a degree of indeterminacy about the nature, significance and role of key skills which has affected the process of learning and utilisation of key skills.

### 8.7 Discussion: Is Rover a Post-Fordist Organisation

The above case study results show the position of Rover in the light of theories of Fordist, neo and post-Fordist organisations. In the chapters 6, 7 and 8 issues of the technology, organisation of work and processes of skill development and particularly key skills have been discussed.

According to our model of neo and post-Fordist organisations we developed seven criteria to establish whether Rover is a post-Fordist organisation.

Firstly, Rover use advanced technology which certainly needs more and higher skills. Setting up new technology and machinery in Swindon made the tasks more complex and challenging requiring high skills workers.

Second, work is organised around the semi-autonomous team, with less job rotation and control over production than in a post-Fordist organisation. On the shopfloor the workers undertook multi-tasks. Comparing the models "*neo-Fordist and post-Fordist*" of teamwork-Rover is mostly located between neo-Fordist and post-Fordist models. In supporting changes in technology and the system of work the company has advanced a regime of human resource management which focuses on revising managers- employees relationships through paid work and job security and the opportunity for workers' career promotion.

Third, in contrast to Fordist and neo-Fordist the systems of work in selection and recruitment Rover emphasises high grade qualifications, and non-technical competency such as key skills particularly teamwork experience and work experience.

Overall Rover's criteria in selection and recruitment are based on those of a post-Fordist organisation.

Fourth, skill formation at the Swindon plant is organised toward the strategy which was introduced by the "Rover New Deal". Interview and observation data indicated that workers on the Swindon site received their training and learning through apprenticeships, short-term training courses, learning and working on the shop-floor. The management's main target in the light of skill development is NVQ level three for all workers. The policy of the Rover training school in terms of merging theory and practice, multi-skilling, assessment, and the chance to go to higher education is matched with the policy of a post-Fordist organisation.

Fifth, Rover attempted to teach key skills in a situated context the methods of teaching through the college and shopfloor production are specific to the company but applicable to other car companies.

Sixth, the aims and content of key skills will be affected by company strategy and culture. The results of interviews with Swindon top and middle managers, shopfloor workers, and apprentices indicated that there is ambiguity and indeterminacy about the concepts and importance of key skills on the shopfloor. Inside the Swindon plant there is a major debate about the effectiveness of key skills in practice. Indeed, key skills were only emphasised on entry and through training but it is not clear what the value in teaching them is in the long run. We argued that this maybe related to the unsettled culture of a organisation like Rover's compared to a settled one like BMW.

The final hypothesis was that in a neo-Fordist organisation skills and particularly key skills are used as a mechanism of control compared to post-Fordist organisation where they are used in order to empower workers. It seems that Rover uses key skills as a mechanism of control and surveillance as well as a mechanism of empowerment and productivity. The socialisation of apprentices into Rover takes place through internal and external factors. Having a job in Rover means more status because Rover is considered as one of the most prestigious companies in Swindon. That's why most of the apprentices believe that their job with Rover compared to other companies have given them a certain status. College teachers, Rover's trainers and older workers train new employees and impart the culture of the organisation.

In spite of largely meeting the criteria of a post-Fordist organisation in the processes of selection, training, utilisation of skills, promotion and Rover strategy one may say that the new organisation of work in Rover increases management control over work. In fact, all those factors which were discussed in the preceding chapters are used as tools to extend company dominance on the shopfloor. Managers, by selecting and screening young people, working as teams and continuous surveillance by team leaders and the peer group on the shopfloor apply a powerful controlling influence on the individual worker and team groups. However it is a quite different form of control from that experienced under neo-Fordism and Fordism.

The above discussion makes it clear that the international competition and lessons from rival and partner companies has resulted in the Swindon plant allocating

considerable resources to training. The Managing Director of the Swindon plant asserts that they have concentrated on two fundamental areas; the skill of their employees and the excellence of their process which is underpinned by the principles of Total Quality Management.

Nevertheless, in addressing the process of work, skills and their mutual relation, In conclusion it could be said that the Rover New Deal, in theory conforms to the principles of post-Fordism at the firm level. But in practice what is observed in Swindon plant indicated something a little different. Conditions of the Swindon Body and Pressing are not entirely in accordance with neo-Fordist or post-Fordist criteria. Rather there is an ongoing movement toward post-Fordist work which simultaneously contains elements of both neo-Fordist and Post-Fordism to meets the demands of the new socio-technical environment.



## **9 What is the relationship between schools and the demands of paid work? The Education Work Debate- Issues and dilemmas of the Swindon Partnership Key Skills Initiative.**

### **9.1 Introduction**

It has been argued that a post-Fordist system of work places new demands on the skill formation system in contrast to the Fordist system of work. The workforce and labour market are being affected by schools and colleges in much more profound ways than before. There has been always a challenging debate about the mutual relations between the skill formation system and the economic system. In fact, whether the schooling system has kept pace with the neo and post-Fordist forms of organisation and consequent skill demands in industry is an area of debate among commentators. The central theme of this chapter is whether there is a new emerging relationship between the skill formation system and paid work. In following this issue, we elaborate the present relationship between paid work and the schooling system in Swindon. While there was a debate ongoing in Rover it was also the case that there was a debate over key skills when Rover and other industries in Swindon sought to introduce them to schools. By following this case study we open out historically the issues relating to the relationship, the anti-education culture, lack of systematic partnership culture, and the issue of the relevance of schooling at this point. On the schooling side we consider questions at the micro and macro levels of

the appropriateness of current education policy with respect to education-industry links. Is it the case that GCSE's and A-levels do not provide industry with key skills? Do league tables, ironically, shore up the academic-vocational divide and hence perpetuate the long standing complaint (Weiner, 1981) that education is not sympathetic to industry's needs? Do schools in the Swindon area teach what is needed in a leading edge company like Rover? Is it industry which still has not done enough to change its organisation to utilise students' skills and knowledge? Or is it employers who are not sure what kind of skills are needed? We have already described the key competing theories between education and the economy of the Fordist period (Shultz, 1961; Becker, 1964; Kerr *et al*, 1973; Bowles and Gintis, 1976; Bourdieu, 1977; Sobel, 1978; Carnoy, 1978; Collins, 1979; Levien, 1987) and post-Fordist periods (Brown and Lauder, 1997; Ashton and Green, 1996; Brown and Scase, 1994). Therefore, in this chapter we will try to see how these theories explain the links between the schooling system and industry in either neo and post-Fordist production. And in particular to see how the education system caters for both neo and post-Fordist organisations. Is it the case that schools rely on teaching basic skills as a kind of fail-safe- or least risky strategy? In Swindon a partnership in which the Rover Partnership Centre has been central set up a number of pilot programmes addressing key skills in young people, specifically: communication and presentation, working effectively together, problem-solving and decision-making.

## 9.2 Background of the Swindon Education Business partnership

A brief review of the Swindon local labour market and economic perspective will help us to understand under what economic conditions the links between schools and industry and, in particular, in relation to key skills are best effected. Swindon is synonymous with both success and change. In a period of less than fifty years since 1951 the urban area has developed from a primary railway town of 76,000 residents to a major regional centre and unitary borough in which over 100,000 people now work and an estimated 170,000 people live. Although much of Swindon's previous growth was based around the railway, over the past twenty years, the town's economy has successfully diversified to support a large number of manufacturing and service based industries. This diversification and growth continues today. For example, since 1991 manufacturing employment in Swindon has risen by 17% compared with declines of -18% and -7% at a regional and national level respectively. Taken together with employment growth in other sectors an additional 7,900 jobs have been created in the borough since 1991, an increase of 9%. This compares with growth of 0.3% and -0.3% in the South West region and Great Britain respectively. Strong economic growth has been one of the main reasons for the Borough's continued population growth in recent years. Inward migration remains relatively high fuelled by the many job opportunities in the town. Young couples, many with families, are particularly attracted by the many job opportunities available

locally. This continued migration has led to a distinctively young population within the borough. Coupled with very high activity rates, particularly for women, the town has in recent years seen a dramatic increase in the size of its labour force with a very high proportion successful in finding employment. The local employed labour force has been swollen by the rapid rise in inward commuting with a significant number of people now travelling to Swindon from the surrounding Counties of Berkshire, Oxfordshire, Gloucestershire and Wiltshire as well as along the M4 corridor. Looking ahead, forecasts indicate continued growth in the local labour force with an additional 13,600 people looking for employment by 2007, an increase of 14%. The employed labour force is set to increase at a much greater rate as expected economic growth coupled with the town's excellent communications fuels a further increase in commuting. This and the other development set to take place within the Borough will further consolidate Swindon's role as a major regional economical centre. Swindon has the highest number of companies with over 100 employees for a town of its size in the country and its mixed economy means that there are a large number of highly qualified people across all vocational areas working in Swindon. (Swindon Education Business Partnership Document, 1997).

Under this economic situation the key skills initiative has proceeded through the Swindon Education Business Partnership (SEBP). The study of SEBP is important because it enables us to illuminate the school-industry links with respect to key skills. However, in order for us to understand the significance of the partnership we

need to provide some background to the recent development and debate concerning the schools-industry relationship.

### 9.3 Recent development concerning school-industry relationship, nationally and in Swindon

Attempts at co-operation between education and industry are not new. The history of education/industry partnership's in Britain can be divided into three stages. These are; the entrepreneurial period- from the late nineteenth century to the First World War; the collective period -the time between the two World Wars; and the corporate period - from after 1945 to the present (Esland, 1986). Changing capitalist regimes of accumulation, economic performance, nationalism, the conflicts between social classes and changing career routes open to individuals are the main factors which have influenced relations between education and industry in the UK (Shilling, 1989). Following the Ruskin College (Oxford) speech in 1976, by the then Prime Minister James Callaghan, one of the initiatives proposed was the Schools Council Industry Project. This was accepted, and the project started in 1978. Since then there have been a range of initiatives such as SCIP -School Council Industry Project, 1978; TVEI-Technical Vocational Education Initiative, 1982; Industry Year, 1986, the Employment Compacts (1988); Vocation Education Task Force Report " towards a Skills Revolution"(1989); the Education Business Partnership Prospectus, 1990 (Lawlor and Miller, 1991). The National Curriculum and Enterprise in higher

Education Programmes constitute a powerful imperative for the traditionally separate worlds of business and education to find out what they can learn from each other.

The study of the Education and Business Partnership in Swindon has a historical context, issues, structure, scope and function which differentiate it from other partnerships. The historical background of the partnership in Swindon goes back to the introduction of the Compacts. There were run by the Department of Employment to generate inner-city compacts and to promote a nation-wide network of partnerships in each of 82 areas of England and Wales in which Training and Enterprise Councils (TEC) had been established. In Spring 1993 Wiltshire TEC contracted with the Swindon LEA to manage the Compact programme which was launched in April 1993 in the south of the county. A year later mid-Wiltshire and Swindon joined and it was anticipated that the programme would be funded for a period of 3 years. To do so, Education Business Liaison Management (EBLM) has taken the responsibility to work with the schools and colleges in the development of their own individual programmes. At about the same time some Compact schools and colleges were introducing GNVQ programmes and it was evident that there was a considerable amount of commonality in the objectives, content and processes of Compact and GNVQs. In particular mandatory and non-mandatory key skills appeared frequently as areas of development in Compact programmes and were fundamental to GNVQs. Links with local companies had given Education Business Liaison Management (EBLM) an insight into their training programmes of several

locally based large companies and they have worked with them over a number of years in the development of training programmes for teachers and students .

Eventually the Management of Education/Business Liaison decided to put forward a proposal for a specialist local education authority initiative for Swindon. This proposal which was put forward in 1997 sought to develop a model in which all schools, colleges and the business community within Swindon are able to deliver equality of opportunity, promote positive attitudes to learning and raise achievements through the development of a coherent programme for all stakeholders in Swindon. The main aim of the Swindon Education Business Partnership(SEBP) was:

- A. to enable partners from education, business and other professional bodies to work collaboratively to promote life-long learning at a local level;
- B. provide workplace relevance and enrichment to the school curriculum;
- C. promote key skills and work attitudes and behaviours sought in business and education;
- D. advance skills and the pursuit of excellence which will promote competitive success in business and industry;

- E. enhance continuity and progression of learning, training and accreditation from cradle to grave';
- F. inform and create opportunities for partners which will lead to shared learning experiences and opportunities. (SEBP documents 1997)

The proposal has three main development areas based on existing consortia of schools and companies which have been working together for the last two years.

1. Key skill development of young people;
2. Human resource development -to improve the performance of staff in schools and colleges ;
3. Development of information technology

SEBP partners of key skills development of young people in Swindon include: all secondary schools, Swindon college, New College, Rover Group, Allied Dunbar, Motorola, W H Smith, Inland Revenue, Swindon & Marlborough Health Trust, Swindon Chamber of Commerce, Scott Young Associates, and Fosse PR.(Appendix 9.1 :SEBP proposal, 1998).



Rover originated the concept of Education Partnership Centres in 1989. Centres are now established at the Cowley, Gaydon, LongBridges, Solihull and Swindon plants. They provide a wide range of curriculum activities (up to 17,000 pupil days per annum), teacher placements and other support.

The Education Partnership Centre is now established at the Swindon plant and provides a wide range of curricula, teacher placements and other support. Long established Saturday-morning Skills Clubs continue to supplement local schools provision of vocational skills for 14-16 year olds at the Swindon plants, with an additional special programme for girls introduced at Rover Body and Pressings. In the Swindon Education Business Partnership, the manager of this centre has a driving role in supporting the new scheme of industrial partnership with local schools. Although the Manager of Rover Education Partnership Centre cited that the main reason for the centre is to motivate young people and make better links between schools and work. But in addition the economic and social benefits to Rover were no doubt also considered. These include:

- a. Socialising the spread of costs of training, so the cost of preparation for work is spread between schools and the company ;
- b. to distribute a positive local image of Rover to affect a wide pool of applicants;
- c. to influence aspirations and expectations in relation to recruitment.

In order to draw a clear picture of the issues concerning the case study of when leading edge industries sought to introduce key skills into the curriculum of Swindon school, we first set the broader context by looking at the views of key stakeholders of school-industry relations in Swindon. Industry, particularly Rover Group managers focused on the importance of skills and schools programmes in developing and preparing young people for the workplace. The Manager of the Rover Education Partnership Center told us that it is important that schools and colleges take into account the needs of industry in terms of key skills.

The Managing Director of Rover Body and Pressing was asked to what extent young people come well prepared from the educational system and to what extent more needed to be done with schools? He replied that;

“ We are working with schools, so we do have a partnership centre with schools which you may or may not be aware of in order to get a line to this sort of business and how to align their curriculum and what they are teaching. We do teaching here on site, you know “bring your maths or physics class here”. So we’re doing a lot of that. But I suppose it still feels to me that reflecting back schools are not sending people to us with already the sound technical understanding that I had when I came out of education into industry. I came into an apprenticeship already having done technical drawing at school and so on. You do not see any of that nowadays, so you’re starting a much more general educational level. It doesn’t feel like schools are thinking “there’s a calibre of pupils in our school who could do this and giving them basic technical training at school.”

He asserted that schools’ general curriculum does not provide the kind of skills and competencies they were looking for. The Rover Manager of Skill Development who

has responsibility for interviewing and selecting young people had a different view.

He commented that:

“...I think there are some huge improvements that could go on - on both sides. When I first came into this job we used to talk about industry/education liaison and we recognised there was a gap. When I left school and came into industry the gap was enormous. There was no similarity between the type of discipline, the environment, the sort of things I'd covered, the way I was treated, they were completely different and I was completely unprepared. I think the things that need to be done is that on the employer's side we need to be able to be convinced that schools are better now.”

He thought that schools were looking for longer periods of work experience for the students and employers are looking for higher levels of academic opportunities for those people who are capable. So both sides are gradually moving together. However, he did wish that the vision of industry was more easily understood by education, because teachers advise students that they need to go to university full-time.

“most teachers are still anchored in the idea of 'You're bright. You need to go to the university full-time and therefore you go on to the 6th form College or you stay on and do A levels. That is the route they understand and it's the only route they'll ever recommend. because that is the route they understand and it's the only route they'll ever recommend.”

He pointed out that the Rover Group, in order to give more information about the progression at work have already focused on the idea of personal planning, and life-long planing.

“ That is what this is. It's a planning document, which is about career progression. But I think that things like vocational courses - they haven't cracked it yet. But how we in industry get into that and give the options and help and so on. . . . the French system seems a good one. That girl up there is French. I get loads of them. I'm always getting them over from France, because I've got a contact there. Their courses are 6th Form type courses and have a very significant slice of vocational work in them. Some of them are international. I've got four at the moment over here from France and it seems to me that it works really well. They're getting their vocational and education support - it's not university - it's a 6th Form type of management. “

He also believed that school career teachers were biased in persuading young people toward university and further education. While there are a good opportunities at Rover to follow further education. Swindon Personnel Manager claimed that whatever results young people come to Rover with their training school had the potential to develop the kind of skills required by Rover.

“ I hadn't reflected on that before. I do feel that the quality of young people that we get in to do an apprenticeship is a reflection of our training staff and its improving year on year on year. So although they are coming in with a clean sheet of paper in that sense the material we have got to work with is very good. They are drawn in by the reputation of the company and by what they know of the training they are going to get here. So we do have the possibility of developing young people's skills and we have very few failures and a lot of successes. “

Clearly there are, to some extent, conflicting views between the senior managers concerning the adequacy of education to prepare students for work at Rover. On the one hand the Managing Director of Rover wants a return to elements of the education system of the past while the Personal Manager thinks there are few problems with

the system as it stands. In contrast, the Training Manager believes, that in another sense, the education system still lives in the past. Is there a more consistent view expressed by the education sector's views of their links with industry?

What do schools say about the relationship between schools and the local economy in Swindon? Headteachers and teachers had different reactions. The Head teacher of Comprehensive 1 argued that they are particularly concerned to identify the needs of the local economy in respect of particular skills. He said that they not only looked at traditional skills, such as , English, Mathematics and Science but also at what might be called higher skills, such as how young people work together as part of a team, how they solve problems, how are they are able to relate to one another and fit in to an organisation. He asserted that a key issue was that of trying to develop a culture of learning.

“...I spent last week at a big company and one of the things they identifying there is that yes, they do want good GCSE passes, they would like to see youngsters coming with Math, Science , English , Numeracy and Literacy skills, but they want youngsters who are going to come able to fit in with a good work ethic. And I think the major issue we that we have got in this country, and in particular areas, to face is in terms of developing a “ Learning Culture”. If I can illustrate that, we have quite a significant number of parents, who when they were in schools, had a bad experience, who were turned off from learning, who had a curriculum which probably wasn't suited to them, and who therefore developed what we call it “ Anti-Learning Culture”. Their kids go to school because they have to for legal reasons. That rubs off on the youngsters, who come into school and aren't particularly interested in learning. We have to find ways, both in terms of the learning and teaching strategies, but also in terms of the curriculum that we're providing for them to encourage and

motivate them and make things they are doing relevant. (Headteacher of Comprehensive 2). “

He commented that what they are trying to do in school following a long term agenda, is to create an attitude in young people of learning for life. He added that :

“...youngsters have to take ownership of their own learning. A lot of youngsters come into this, and I’m sure every other school, saying “I’ll do what the teachers tells me to do” and very often we’re at the fault in the teaching profession because we teach a lesson and do not tell the kids why they are learning what they are learning, and then we wonder why they are switched off and they are not engaged in it and they have not got ownership of their learning. I think Its very much about changing a culture, because the culture that exists within the British educational system isn’t the same as in some other world economies (Headteacher of Comprehensive 2). ”

Choosing a strategy of developing a culture of learning was an important vehicle to strengthen the relationship between schools and the local economy, because this anti-learning culture is in conflict with the idea of continuous learning in companies which is a fundamental principal of post-Fordist systems of work.

One of the key issues underlying the relationship between school and industry is the idea of a partnership culture. A “partnership culture” means a commitment and responsibility to develop a consistent relationship between the partners. The Careers teacher of Comprehensive 2 focused on this issue.

"If I explained it here we are one of the first schools in Swindon to have a school business partnership if you like where we are actually linked with various partners. We were helped in that by Swindon Education Business Partnership that now is. We have a number of

partners who we work with closely and others less closely, but are in some way linked, and they have for want of a better way of calling it "a steering group meeting" once a term with the main partners to review progress or whatever. The main focus for that group is what we call curriculum support, in other words, how local companies might help in particular, a very pragmatic group, about particular curriculum projects that might be going on. For instance, here we have a language day, where they going to workplace to do an industrial simulation about selling their goods in the target language, etc., and they spend a day at a company to do that. We use Rover a lot, but at the moment that is a little bit up in the air with Rover's own difficulties and so on. Work experience is another area and we work with Trident here. Well all Swindon does now. That is based at the LEA, the Swindon LEA are in effect the agents for running Trident. Work experience is its main function, but it accredits community service and other activities as well. But that is a national educational charity. Those are the two main areas, but it's not always easy. ... because companies will give their own perspective on why it is needed, but from our perspective, you can often put a lot of time into building up and nurturing a link and then one key person may be promoted, moved, leave, and all that works goes down the drain. Because the link may not in reality be with the company, It's with that person. Though nominally you're using their company but that person pulls all the strings to make it happen (Career Teacher). "

He was actually concerned that the relation is very much a matter of individuals. If somebody in industry was positive, he/she can make links happen. He also asserted that a lot of companies feel schools are making conflicting demands upon their time when they need to focus more sharply on business. Indeed these two issues namely lack of a partnership culture and too much focusing by the business side on production in order to be competitive might make it difficult for smooth and continuous links to be sustained.

In contrast the Headteacher of comprehensive 2 expressed the view that they are trying to contribute positively to the economy and workforce, but that they also

trying to turn out round well citizens. He cited a potential conflict which might happen if schools focused on the 'business side rather than take into account the aim of developing good citizens.

“ There can be sometimes, the driving need in a particular area like Swindon, to over emphasise certain aspects of the curriculum to the detriment for the general education of students. For example if you look at Silicon Valley, you could look at the requirement for IT and I could turn over quite large part of schools to IT and communication, perhaps to the detriment of humanities subjects or Physical education subjects and that clearly would be detrimental. We have to strike the right balance. We set up our business partnership about eight years ago. They were reviewing the national curriculum, and I said to business when I went round trying to elicit their support “look, if you are coming with us and you can actually have a say before we write our schemes of work on the basis of the NC document”. In other words, give us the relevance. Give us the work related curriculum so that we can make sure that our teaching does take account of that rather than just as a bolt on, which I think in the worst situations, in the worst schools and areas, that is what you have a bolt on. (Head teacher of Comprehensive 2).”

He added that only some of companies accepted that invitation. He believed that it is a hard job to develop links with industry.

" Its hard work actually because you get a burst of enthusiasm with two or three people who will join your business partnership and then they leave. We have had spells with companies like RayChem and likewise with Honda. I went on an exchange with Honda, I enjoyed it, came back, was buzzing with ideas, they in-putted a lot and then suddenly it all goes cold. It's a bit like that and what we want is something that is sustainable and repeatable because if it's good for a child in 1999, Its good for a child in 2000. Obviously adapt and update it. But the trouble is it tends to peak and people like Charlie the career teacher work very hard to try and make sure there's some sort of thread and continuity. "



It seems the problems involved in creating that a culture of continuity between demand and supply sides are considered. Therefore, a question is whether it is at all possible to get a culture of continuity. On this the Comprehensive 2 Headteacher commented that :

" Its interesting in this area that we have got a very wide base of industry, and that is good, a thriving economy which is good largely. Complacency might be a problem sometimes for students. That they see jobs too readily available....we probably deal with as many small businesses as we do with medium and large. So if you're looking for a core responsibility, they [school] yes, we're going to have to accept that we're dealing with so many disparate groups that its going to be untidy and inconsistent. When we first made approaches to business we decidedly took away the begging bowl approach. We were not going cap in hand to these people. We were going and saying " we have an entitlement to have access to your expertise and you have one to have access to the curriculum and facilities in school and the personnel in schools, so let's forget about altruism and think about our actual commitment" and what we want through work experience and all sorts of relationships with business is that business will, perhaps through the Swindon Education Partnership as a good forum, actually agree on core contribution. Of commitment to education and education to it . If you get that core you can start to look for all the peripheral things which will be individually suited to different business at different times as when certain people are in post and when they leave it changes. But if there's a core of expectation, and I think that is probably what's lacking at the moment, then we might go somewhere."

This quote is particularly significant since it points up the dilemma for schools when confronted with a range of organisations of both neo and post-Fordist types with quite different skills demands. The Fordist days when what was required of close to 50 percent of the population was merely conformity have gone. In their place are a

range of demands for levels of achievement in both traditional school subjects and the soft or key skills. For an organisation like Rover which aspires to be post-Fordist the skill expectations are now far higher than they would have been twenty years ago. But for many small and medium sized companies the skill levels required would be much lower. (Lauder, 1999).

How are schools to cope with this diversity of demand? The Comprehensive 2 Headteacher thought that this was not only a problem for industry but also for schools since the National Curriculum did not give schools sufficient autonomy to develop a flexible and stable relationship with local industry. He had this interesting proposal to make to address the problem.

" Schools are not fighting for a huge core, schools are actually fighting for flexibility, I was at a meeting with DFEs officials a few weeks ago and we talked about a core of Numeracy, IT and Literacy tools and that is the only statutory core and then you create. We all, as teachers, agree that there should be certain areas of curriculum experience that all children should receive, not just be entitled to. There is something in a scientific experience, a humanities experience and so forth. We could all pretty well agree on that, but in terms of basic Numeracy, literacy and IT. Yes, make that pretty well statutory and then give us the flexibility, the responsibility, to make it broad, but also to make it relevant to our areas. Then, if we can do that, we can start to then bounce off business and use their expertise in a much more creative way. To enhance the core. Their core, yes, but our basic curriculum core would then be enhanced. But enhanced in a way that would be meaningful. Too often, and it happened a few years ago, although Its better now in our D & T department. There's a department which you think would use the experience and expertise of business. Often we make an approach, either Glynn Jones, our business co-ordinator, or myself or possibly Charlie, and say "so and so is interested in working on curriculum" and they think " Oh my

god, we have got a curriculum that is up to there, where do we fit this in? That is not the way to do it."

The issues of rigidity and lack of flexibility in the education system have been emphasised by different commentators (Ashton,1983; Finegold and Soskice, 1988). The Comprehensive Headteacher was not happy with the way government treated teachers. He stated that :

"...there's a word that is lacking from education at the moment as far as teachers in schools are concerned and that is trust. We're not trusted to get on with the job. We have a good management structure in schools now. Charlie is my head of department, and he manages me very well. He tells me what the resources are and encourages me to teach in a way that is exciting. We can do it in schools, just trust us to do it. By straitjacketed us really you take away the creativity, which is the key to teaching kids."

Clearly there are several problem in establishing a culture of relationship in partnership between education and industry. Industry is not always clear about what it wants, schools are not given the flexibility to respond to industry.

In order to draw a clearer picture of relationship between schools and the labour market, we then turned to the Rover Group apprentices, ex-apprentices and trainers views, to find out to what extent schools could more adequately prepare young people for training in the world of work? And how much of that preparation should take place in schools, college and at work?

"School really did not help us too much, when I remember school, I would say, our experience did not prepare us appropriately for work and particularly if you mean this career , not at all (16- Engineering Apprentice). "

"I do not think the GCSE level is high enough. The trouble with maths at school is just they work on numbers, when you go to college and you do math and science which is applied engineering, you realise maths in school mean nothing. If students go straight to A-level it is perfect (13- Engineering Apprentice). "

"School does not prepare student for work and you never expect that school can be an interesting environment. Because you learn without understanding where it goes. But here is an example of natural life. You are taught, learn, work, talk and every thing is designed to help you make your time enjoyable and useful and interesting, but school is not look like that (11- Technician Apprentice)."

"I think school can prepare you for A-level or college or higher education, but not prepare you for this career. If at school we are taught key skills properly we would not need to spent a lot of time for learning them here or at college. We could save time and every thing (7-Technician Apprentice). "

"I do not think schools can prepare students. Work experience at school which I did last year of GCSE was very good, it just prepared you a little bit, apart from that not really. When I came here everything was different for me (3- Engineering Apprentice)."

" School generally does not prepare students for the job like engineering, they are forced to do some subject such as English, maths, science and so on which is not specifically related to a specific job.(5- Engineering Apprentice)"

"I truly didn't enjoy school, but when I came here from the first day , the training was interesting for me (1- Business Apprentice)."

Interviewees were asked to state what kind of abilities commonly need improvement when apprentices came to Rover. Apprentices and trainers and ex-apprentices were

generally unhappy with the level of math and science and engineering backgrounds of new apprentices..

“ When I came here I had not any engineering background; Everyone on the first year was taught to the same standard NVQ level-2, obviously some people are slow, but college and training school do their best to help people everybody reaches the target before they go to the shopfloor. (8-Ex-Apprentices). ”

“ Our basic knowledge on maths and science did help a little bit. GCSE teaches students for four years without considering what is going on at work. This makes student just think of passing courses instead of truly learning and understand the meaning of them. I would say GCSE is not applicable at work as a matter of fact. But when you come to work you can realise the application of maths, science and technology, which is different to the school environment (18-Engineering apprentice). ”

One of the Rover training officers said that they run a skill club for school children coming to Rover. If pupils are given some simple maths problem they struggle unless they have calculators. He suggested that for an engineering career they needed to improve their maths and science knowledge.

Despite these views, other apprentices, and trainers thought that schools generally prepared students for the labour market. They took the view that it is difficult for schools to exactly develop applicable skills among students because of the diversity of industry and business.

“...think school generally prepares the school leaver for work quite well. I would not saying school prepare student for Rover but they seem generally to prepare them for work. (11- Technician Apprentice) ”

“...it is really difficult to say that, because there are a variety of jobs with different requirements. But schools need to consider more key skills which are demanded by different careers. School didn't give me enough of key skills or preparation for work. You know schools give you general knowledge and they can not prepare you for various careers, generally it is sufficient I mean if you are in an excellent school they still can not give you knowledge for different jobs like office or engineering on anything else. But a mixture of training here is with college very useful for my preparation. College compared to school treats student better. Key skills we have done here and at college are really good (9- Engineering Apprentice).”

The apprentices views indicated that the school curriculum should provide pupils with a broad educational background. Finally, one interesting point was that the apprentices did not mention was the importance of qualifications as a criterion for recruitment. The career teacher of Comprehensive 2 noted that:

“...one of the tricky things for us in school is that employers aren't often that worried about qualifications. I have to quantify that to youngster. The way I try and put it over to them is that Its like an athletics race. There's a starting line and to qualify to get on the starting line you need these qualifications, but once you get to the starting line in a sense they throw them away. They are not interested in them. They then take them for aptitude tests or put them through their own tests to test them for the competencies they feel are important for their particular work. So Rover particularly do that. They all go down there for aptitude tests and whatever, so presumably they'll decide for this particular area of work this is the educational minimum we'll need and for other things they'll want higher. ”

However, the main question that was raised from this part of the research is that just as with the manager at Rover, teachers, headteachers, and pupils have different points of view about the respective role of schools and industry. In spite of the fact

that they see education as an important and valid place for preparing workers they have conflicting views as to how it should be done. If schools are going to play an active role in the economy, policy makers should think of an alternative curriculum in terms of its relevance and fitness to the needs of different stakeholders and the local labour market. Arguably, disagreement about the school curriculum provides one answer as to why industry sometimes feels that education is not coherent and reliable in developing what is wanted. Therefore this results in weaknesses in developing a stable culture underpinning the relationship between schools and business. Meanwhile, the link between schools and paid work is faced with conflict, ambiguity and uncertainty. The key skills initiative provides a prime example of the uncertainties surrounding the school and labour market relationship and it is to this case study now turn.

#### 9.4 The Key Skills Initiative

The type and size of industry and organisations and their positions in the labour market can affect the process of any partnership. In relation to Swindon the partnership players were the Rover Group, Allied Dunbar, W H Smith and Burma Castrol and these actively participated in developing the key skills initiative. Discussions took place with the training departments of Allied Dunbar, Rover, W H Smith and Burma Castrol, all of whom are based in Swindon and all expressed

enthusiasm to become involved in developing key skills in young people. All the companies invest heavily in on-going inter-personal skills training with their own employees and recognised that they had expertise which might be helpful to teachers. (See appendices 9-2 to 9-6). However, there was also recognition that there were a number of benefits to the companies. Firstly, if young recruits arrived in the companies with better developed inter-personal skills they could be inducted quicker, progress faster and the company would make significant savings in training costs. Secondly, the training departments recognised that they had much to learn from education and welcomed the opportunity to work collaboratively with teachers. Finally, although it was not clear at the time it has become evident, as the project has developed, that the training departments have benefited from sharing their ideas with one another.

At an early stage it was agreed that each company would focus on a specific skill.

- \* Burma Castrol and Allied Dunbar would address Communication Skills, and Presentation skills in particular;
- \* W . H. Smith would focus on Working with Others;
- \* and Rover on Problem Solving and Decision Making.

Several meetings took place throughout the Autumn and Spring of 1995/6 at which the programmes were developed. Four Swindon and one Salisbury school were



approached and readily agreed to be involved in the trial programmes. All the schools were involved in Compact and some were running GNVQ courses, and the Salisbury school was invited because it was introducing a Part 1 GNVQ course in September 1996. The courses had a common style with the students working in groups of 5 made up of individuals who did not normally work together. Each group had a process observer attached to it who concentrated on helping the students understand how they were working together and how they could do this more effectively. All the process observers were either company employees or teachers. All the courses were jointly delivered by company trainers and educationalists and consisted of inputs and activities with the activities being largely business focused and the courses were delivered on company premises. The trials took place during the Spring and Summer terms of 1996 and the evaluations by students and teachers were very positive. The content and process of each course was universally applauded but there was also agreement that there were other benefits for the students. They gained from experiencing a programme which was jointly delivered by business trainers and teachers; the opportunity to work in a business environment was appreciated; there were benefits in having business representatives working with the students as process observers; and it was an advantage to have real business tasks to work on.<sup>1</sup>(SEBP Documents 1997). However, the partnership in terms of

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<sup>1</sup> For a report on these programmes see appendices 9-7, 9-8, and 9-9.

developing key skills was also supported through the development of a number of programmes by industry and the LEA for pupils at key stage 3 and 4. All these projects were aimed at raising awareness among teachers, pupils and schools about the new system of work and the kind of competencies which are valued by industry.

The LEA and some of the schools approached the issues of key skills from two ways a) through work on their curriculum to develop key skills and b) through pupils' work experience, mentoring and teachers placements. Work experience and teacher placement was also considering by Swindon's Education Business Liaison Manager as a convincing way to develop key skills among young people. He commented that:

“ we put together work- experience programme, and that is now managed centrally through SEBP. They manage 2070 placement in a year. It really improves quality, companies contacts with schools and the teachers placement programme. We co-ordinated with Rover, we just got 120 placement last year, there is also a mentor programme. Roughly around 200 business mentor student one to one, one business person working with one student.”

One of the key issues underlying this initiative which was raised in chapter 4, was that of whether the various partners had a commonly agreed understanding of what these key skills meant in practice. They clearly assumed that there was a generic component to key skill which could be profitably taught in schools but as the manager of SEBL pointed out.

“...companies I think have shifted a lot of the big ones and moved to a view where your investment is actually your people.... I think that is

right. Sometime they are certain and sometimes not certain. In fact [the Manager of Rover Partnership Center] did pull together some information from a number of companies about what they actually meant by that and there were differences. They might use different language though to mean the same thing as well, Its very difficult though. "

In the event the assumptions underlying the key skills initiative were put to the test. At a meeting of local teachers, Headteachers and Governors with the committee who were steering the key skills project, at the Goddard Hotel, Old Town, Swindon - 24 November 1997, the initiative founded. The purpose of the conference was to convince education representatives of the importance of key skills. The committee explained the reasons for the key skills initiative from the industry and Education Authority point of view. But the participants raised significant questions such as:

"Because the academic background of our students is very important for us and their parents do you think these skills can help our student get better results in exams, and help them to easily transfer to higher education ? What are the advantage of these key skills for pupil in Further and Higher education?"

"It seems difficult for our school to put all these key skills together to reach the expected level. Do you think this is not very unrealistic ? Are schools able to achieve all these goals for different industries? Are school able to put in to action these theories?"

Skills need to be more defined in order to be manageable and transferable to curriculum. Do you think Rover present definition of skills is enough to transfer them to the curriculum?

At the present time we have different qualifications and really these make every body confused. With these new key skills that you are

addressing do you think you are adding another qualification or what?  
Is there something wrong with GCSEs, GNVQs?

“What impact has introducing the new competencies you mentioned  
(Allied Dunbar initiative and Rover key skills) had on the culture of  
your company?”

“Are the needs of small factories similar to large factories? If they are  
not how are you addressing their needs to create a life long learning  
environment in Swindon? “

“What kind of support can industry provide to teachers for delivering  
the key skills project ?”

At a meeting of this committee prior to this a careers teacher encapsulated the mood  
of teachers at the meeting.

“ ... but I think the biggest problem is the fact that you are trying to  
superimpose one system on the top of the another, and if it was  
integrated from the top as it were, then I do not think there'd be a  
problem. But I think head teachers are pretty pragmatic and what they  
do not like having to do is repetition if you like, though it may not  
actually be repetition. So GCSE is where their main effort is and  
where they feel they are under pressure, so key skills work actually is  
part of their GCSE work already. I think it will actually go ahead, but  
it may not be recognised. There's a difference between actually doing  
it and recognising it. If its something additional to that I think there's  
a problem. Here on behalf of Trident Consortium at this school we're  
having a go at piloting work experience log books which actually  
focus on the key skills that the youngsters are hopefully going to  
achieve or show some competence at while they are in the workplace.  
It's not accreditation in any formal way, but I think its more  
awareness raising, so we're making youngsters aware of what key  
skills are and then while they are in the workplace they ask their  
supervisor to sign off things that they are doing. Just a recognition  
rather than accreditation (Careers Teacher).”

School representatives complained that there is not enough information about the Key skills project. They also add that the way the Partnership intended introducing key skills into the curriculum was ambiguous. According to the teachers, there was a need to change the emphasis from purely “skills for Industry” to skills for adult and working life, a much wider brief. Working life includes activities which are much more varied than those needed for the economy.

In addition to the debate about key skills, there was another argument over Rover’s perception that schools concentrated on individuals rather than on teamwork. The Manager of the Rover Education Partnership Centre argued that school is about each individual going as far as possible through the exam system. It is not about looking at people’s strengths and weakness. The Rover Group wanted students to be more supportive of each other, but this was not what was being encouraged in schools. However while this was Rover’s initial position there was now a debate within Rover as to whether it was the school’s or Rover’s training system which was at fault.

“...management are beginning to question whether it is the school system which is problem or whether in fact, people arrived with these skills, but they do not take them on to the shopfloor.

In contrast the Headteacher of Comprehensivesaid 1 that industry sometimes had a right to complain about the way schools teach key skills, saying that there is a battle over it.

“...I think you have traditional teachers who have always taught in a particular way. When we were developing an academic curriculum in this country based on the model of the public school, because that is where the English education system was derived from, where by you learnt your Latin, Greek, English and music and so on, but it was done in a very academic way. It was knowledge for its own sake, now relevance. So I think we need to get that balance between the two. “

He mentioned that they are trying to change the culture within the education system and a vehicle like IT is very helpful in changing that culture. But in many schools they have not got the opportunities.

“...to give you an illustration, we are desperately short of computers in school. For a school of nearly 1300 pupils we need many more computers and if we had them, I would have suites of rooms with youngsters actually able to access them virtually right across the curriculum. There would be no problem. But we do not. We’re building up very gradually and as we build up, so we have to build up the skills for the teaching staff because when I came into teaching, computers were not heard of in schools. We have all been through the phase from the first computer we got being that big, right the way through to the current environment, internet and so on. We’re just getting the internet into the school here and we have yet to look at the ways in which youngsters are going to be able to access it most effectively. But IT is a great motivator for young people, it is a great learning vehicle and if we could actually move the agenda forward in terms of that then I’m sure we will succeed in developing those wider skills.( Headteacher of comprehensive1).”

The comprehensive 1 Headteacher also commented that the agenda was moving from teaching youngsters content within the curriculum to giving them skills which include adaptability , flexibility, and the ability to work in a team. There were

certain generic skills youngsters could learn which would enable them to operate as team members within different contexts.

“The agenda is moving from teaching youngsters content within the curriculum to giving them skills which include adaptability and flexibility. The ability to work within a team very much depends upon how you relate to other team members and you can take a youngster and put them into one team and they are going to have to operate in a totally different way to taking them and placing them in a different team. That is your difference if you like between Rover, Allied Dunbar, etc. Nevertheless there are certain generic skills that youngsters can learn as well, which enable them to operate as a team member within these different contexts. We’re trying to develop this through the curriculum itself, but we’re also trying to do a number of extra-curricular things to develop these skills in youngsters, through projects of a variety of types. We have here twice a year “a challenge Plus Day”, that we run for able pupils across the town. We have about 120/130 of the most able young people in a particular age range who come from all the secondary schools in Swindon and work together on a problem solving challenge within the school hall for the day. They have a facilitator. They come in and are placed with pupils from other schools they’ve never known. When you go in there first thing in the morning there’s total silence. They are not talking to each other. By the time you get to lunch time they are operating as members of teams. We working with the “Unlocking Potential Project” with David Hemmery, the Olympic hurdler (1968), whose now the president of the Sports Council. He came in and worked with us on coaching skills with young people, and again developing those skills enables the staff to work with young people, but also to enable young people to develop those skills themselves. They had an outdoor pursuits day where they went out and were given a challenge of actually building a Bridges across a stream in team. All this is about team building ,problem solving, developing that wider aspect, those higher order skills, over and above the literacy and Numeracy.”

It is worth noting from this quote that the headteacher took the view that there are both generic and specific dimensions to learning key skills. He contrasted this approach with the teaching of English, or Science in a way that does nothing to built

self-confidence, nothing to enable young people to present themselves, nothing to enable young people to work in teams or solve problems. Because everything is given to them on plate. He commented about the lack of strategy to deal with learning and developing of key skills among youngster in schools.

“ ...I think the big battle at the moment within the education system, is about the process of education. How we are teaching and how we are learning? I can take you to the classrooms in this school, where the member of staff will stand at the front of class and virtually lecture to the class, and the class will listen or sleep, depending on their propensity. How much are they learning in terms of generic skills? I can take you to other classrooms where member of staff will stand up at the beginning of the lesson and say “okay ,that is what we are going to try and learn together today. Now I want you to get into groups and this is the problem I want you to solve. Once you’ve solved it- and you have a certain time in which you’ve got to do it- bring back the answers and we’ll discuss that and bring it together. What can we draw out of that together? A totally interactive way of operating with young people. Now lets see if we can use IT in relation to this? So we are actually using the multiple skills within the context of learning. You tell me at the end of those two lessons which youngsters will have learnt more and the answer is that youngsters who have actually been involved, because if you’re involved in something you get motivated by it and then you actually learn. So the battle is about how we teach and learn. Its also about relevance. You can sit a child in a classroom and say to them “ we are going to learn this...” and if you do not actually tell them the purpose of learning it...they need to understand that, there’s a certain purpose, objective, the relevance of it, how it can be applied beyond. Whether in recreation or work.”

It is interesting to relate these comments to the discussion in chapter four. It will be recalled that it was suggested that learning key skills may be the same as learning a language. That some language learning can be done outside its national context, but



fluency can only be reached within context. In fact this is precisely the kind of theory of learning of key skills that headteacher has developed:

“ let’s take an example of what we have within the school. We have youngsters learning French and German. Sitting in a classroom learning a language, there may be not a great of relevant to the pupil. Why am I learning this? I may go to Germany or France. We have established a link with two schools in Germany, the youngster are mailing pupils and vice versa. They are talking to each other. There will be an exchange at some stage when youngsters go over and live in Germany, practise their language. How can we make it relevant in terms of industry? Well there are lots of international companies in Swindon where the use of language is important so we do a simulation. We go to Rover or Ray Chem and we get some of their German or French speaking staff and we do a simulation within the workplace. The youngsters work in teams to do a simulations and they are assessed on a whole range of different skills, including the use of language, presentation skills. Where we can not do that we do simulation within school. So immediately you’re bring in application and relevance to that situation. OK, so all sorts of higher order skills come into that and its relevant. Why? Because the kids can actually see the effect of what they are doing. I think the more we do of that the more relevant it becomes (Headteacher of Comprehensive 1).”

An implication of this view of learning is that it requires flexibility to develop motivation. Such flexibility requires a range of strategies.

At Comprehensive 1 records of achievement were used for this purpose. These records of achievement include all activities which pupils are involved in, in school sport, and the town football club. In all these places students get courses in problem solving, IT, presentation skills and teamwork. It is also a summary of how all pupils have done in schools. They are able to take these records with them for interviews.

However, there are limits to the flexibility schools have to pursue such a learning strategy.

### 9.5 Issues and Problems of Partnership

So far the relationship between education and paid work has been discussed. The study of the Swindon Education Business Partnership (SEBP) shows degrees of success and failure in its activities and initiatives. In discussions about the failure of SEBP we could address the following problems.

First, there was a feeling those key skills concepts and its teaching are living in a vacuum. There was a feeling among school representatives that much of the Key skills initiative was not clear in terms of how the work will fit into the curriculum in 11-16 schools.

The key skills initiative raised the question of to what extent schools should be involved in trying to accommodate industries needs. This question highlights the tension between what industry may want and what schools do. The headteacher of comprehensive 1 in noting the tension commented that:

“ There is [tension], because education is not just “Utilitarian”. Education is about developing the whole person and therefore local industry might say “ I do not want someone who can come along and appreciate Beethoven, Shakespeare, or whatever that is not necessary”. Now I would be very worried if we were producing youngsters who simply had skills that were required for industry and we have not developed them as whole people. There is something in life which is called leisure. I know those of us that are working very

rarely see it, but there's leisure and recreation- and I think Its so important that we should actually give young people the possibility to develop the skills and talents. One of the things we have done quite a lot of work on is there are different styles of learners. I do not know whether industry has completely taken this on board, but there are youngsters who are auditory learners, visual learners arts- who work with their hands particularly well- and our job is to actually develop the talents and skills and the potential of all youngster in all those areas. I would be very worried if we had a utilitarian agenda, which simply said " Okay, we are building the economy of this country and therefore we need youngsters who have go IT skills and maths and English and that is fine". We need to go further than that and say "OK" education is bringing out the whole person. It is about the consideration of world issues, it is value laden. It is not value free. Its about developing moral sensibilities in young people. It is about citizenship, which is one of the latest agendas as far as the government is concerned (Headteacher of Comprehensive1)."

Teachers pointed out that through a series of programmes they had already made an effort to make the process of learning relevant to the future paid work. In fact schools face problems because their curriculum and GCSE courses are largely academic and quite a large percentage of young people go on to further education or university. In Comprehensive school, for example, about 60 to 70 % go on to the further education and university and 30% do other things which would include on the job training. School programmes, however are not designed to directly respond to the demands of specific industries. They have a wide variety of industrial demands to meet. In schools the focus is on national curriculum requirements, which do not include the concept of key skills. GCSE for example, emphasises academic learning based on individual competition, and individual assessment.

The second issue which is related to the first one is the tension between team and individual learning within schools. We have already discussed that there was a discussion within Rover that schools concentrate on individuals rather than teamwork. This tension was identified by Brown, *et al.*, (1997) who argued that external involvement in education does not rule out the possibility of a growing contradiction between education and employers.

Why does this contradiction continue to persist and even grow? It is hard to define variables which effect the contradiction. Brown, *et al.*, (1997) believed that part of the problem is related to lack of group work because the democratisation of education opportunities has depended on the individuation of success and failure.

“Ability and performance, like the concept of meritocracy , is assumed to be judged on an individual basis. Group assessment which could be introduced as a way of encouraging teamwork in a formal educational context is also rejected, because it is difficult to evaluate when individual grades need to be assigned. Another reason is that it is unlikely emphasis on the development personal and social skills to gain widespread support, especially from the elite schools, college, and universities. This is because the credibility attached to academic credentials remains based on the objective assessment of knowledge epitomised by the unseen examination paper.(pp.10-11)”

In terms of the importance attached to exams in hindering the key skill project, the manager of Swindon Education Business Liaison commented that:

“ ...I think those who are doing their GCSE exclusively are perhaps not quite as competent in the area of key skills. So those sorts of courses do help, certainly in 11-18 schools...but there is a huge pressure all the time on getting your exam results, which is the very visible public means in which you’re measured. So it is still there I

am afraid and I'm not sure it is going to be helped necessarily by the latest proposals for post-16 education, of actually doing something about A levels which would have put things on a parity. I think it is a missed an opportunity. We will see. But I think it is still an issue."

The perception seems to be based on the cultural polarity between schools and industry. For pupils and students, situations tend to be highly competitive, many students derive their motivation from the prospect of achieving higher grades than their peers, a large proportion of the work is individual as well as judged on theoretical correctness rather than practicality. This individuality could be one reason why team-working skills are often viewed as of little importance. Hence the competitive culture is not conducive to team-working and even when group project work is undertaken, group membership is often selected by the students who choose to work with friends to promote task sharing and reduce conflicts. This would be considered a "false" team situation in an industrial sense where team composition is more than often determined by position or job title and invariably is fraught with disagreement, empire defending and office politics. Endemic conflicts which need to be overcome for the team to work effectively.

The third issue is related to the problems of league tables and the way the National Curriculum constrains flexibility. First , employers are not homogeneous, so the skills levels they demand are different. What post-Fordist industry is looking for is a background in key skills from school and work. These capabilities are based to some extent on a good academic record in Math, Science, Design and Information

Technology. What students are looking for is a non-threatening learning environment in which they can enjoy relationships of trust, honest communication with other students and adults. Teachers in contrast are concerned to impart a liberal education. As mentioned by Lawlor, *et al* (1991) in spite of the many school and industry initiatives there is confusion about the means and purposes of education-industry program. Are they considered as education “*about*” industry, education “*for*” industry or education “*through*” industry? Teachers still have many doubts about the nature of key skills. Do key skills provide more information about industry and the working world? Do key skills specifically address the needs of industry? Or do key skills prepare pupils for life but based on the values and needs of industry? To what extent will key skills lead to curriculum overload? Or bring breadth and act as a vehicle for continuity of knowledge? Can key skills confidently Bridges the academic and vocational divide? As the existing curriculum is overloaded some teachers hesitate to add key skills to the schools curriculum. Especially when there is so much indeterminacy surrounding them.

The fourth issue is related to the student’s outcome. The key skills initiative has been viewed as a remedial programme for schools. Since the national curriculum and league tables imposed such constraints which at the same time relating the academic the alternative curriculum package of key skills effectively became a remedial programme for less able youngster at schools. The Manager of the Swindon Education Business Liaison pointed out that:

“ We wanted everybody involved in that[key skills package], but in reality there were three or four schools who really pushed it, . . . there was a concern key skills are remedial and compensatory. It is constantly there and its not helped by the government in my view constantly talking about disaffected students and always linking it to the less able. There are plenty of disaffected students who are very able as well . The programme-[ key skills] is supported in two schools on behalf of the LEA. Two standard funded programmes at Headlands and Oakfield, where they selected 15 year, 10 students last summer and they are following the programme” .

Lack of a stable concept of partnership between industry and education is the fifth issue. According to Miller, *et al* (1995) the rationality of partnerships between industry and schools can be grouped into three main types: (a) the customer-counter approach- generally involves further and higher education, (b) the macro approach- with the long-term aim of bringing about desirable change within the educational system, and (c) the micro approach-focused on producing direct benefits to the firms and individual partners involved. It seems that most of the activities in Swindon related to the micro approach and short-time activities within each company. But the aim of the Swindon Educational Business Partnership initiative was to create and develop a macro approach and long-term programmes. Given the constraints outlined above it is understandable that a stable culture of partnership has not been developed.

The uncertainty within Rover of the role that key skills can play was another problem for SEBP. As a main partner in SEBP, the Rover managers were not clear about the

role of key skills because there was a indeterminacy about the role and importance of key skills for selection, training and utilisation on the shopfloor.

One of the main problems, however, was the Swindon Education Business Partnership lack of finances. The manager of Swindon Education Business Liaison commented that:

“ ... the difficulty is that there's no core funding at all. Almost none at all. So that is a big issue nationally. There are lots of debates and discussions going on with government about that, but we do not seem to be moving very quickly with that. We get loads of money for projects.... We were asked to manage the selection and putting together the bits for two specialist schools- one is technology and one is performing arts. Now we have got the performing arts one. That was successful. We got the matched funding for that, because it was £100,000. The second was much harder, but would you believe £ 300,000 came from Rover for the technology one and the Rover Centre is going to turn into a technology centre linked to the school just down the road....so that is big issue for us. Its really focused our minds.”

This issue is crucial in maintaining staff to support the necessary development of the partnership. It could be argued that this is a major development policy failure because the SEBP could act as an intermediate institution to ensure continuity in industry-education links, functioning like the German chambers of commerce.

In conclusion despite the failure of the key skill project, the careers teacher of Comprehensive school said that setting up the SEBP could create a shared understanding of what education and employers are looking for. The Manager of Education Business Liaison Partnership is still optimistic about the effects that the



key skills project had on schools and industry and summarised the problems experienced to date as follow:

“ ...during that course of time what we have done is obviously develop a whole range of different programmes and a lot of what we were doing earlier on was focused on activity, we were not worried about strategy so much and that sort of stuff. But get on and do something, show that we could achieve something and that was relatively straightforward. There was a willingness and enthusiasm on the part of a lot of people that this was the right way to go. So we pulled together the work experience programme, and that is now managed centrally and we worked in partnership with Trident. So Its worked really well in Swindon and from having six schools that were operating through Trident, we have now got all of them, including three from outside. We got the technology centre out of that, funding that sort of thing, but that particular task group [the key skills] just collapsed. It was actually a catalysts for the broader agenda and it will come back, there is no doubt it come back with different form. “

## 9.6 Improving industry-education links

Despite the difficulties identified in this chapter, the Swindon Education Business Liaison Manager had a vision of how the partnership could be.

“I personally think that there needs to be a hugely strong message from the government about actually what is important and actually build on that and not thinker around the edges, with bits of funding for initiatives here and so on and get away from things like education action zones are only for deprived areas of the community and so on and look at them in the round and be experimental.so I think Its about actually trying to get out of this problem in this country we have always had, which is that we somehow see the business world as being slightly dirty-in education terms. And I think its still endemic

in schools. I think there could be some very clear strong messages that would come from the government. They may get to that point and there are pressures and influences on them from the business world, no doubt about that. We have had Charles Clark here about three weeks ago officially opening the centre [SEBP] and he was saying that was absolutely right “ we have got all these great initiatives, some of them really good, we know that they are really good, but its difficult to measure them and see what impact they have, they are not concentrated up, they are all funded from different routes, nobody talks to each other about them. I know Its a huge challenge and we have got to do something about it”. Maybe the lifelong learning partnership thing, if it begins to work, if they really go down that route, in schools, Its about getting the agendas different and about recognising, and it will take a long time, that actually if you’re going to equip young people to take their place in the world. They’ve actually got to be equipped in various ways and not just in league tables and all that stuff and look at a range of things. The value added approach may be the way, I do not know. But fundamentally change it and I think the government could take a big lead in that. I do not think they do. There are two or three Heads around who I think have a vision and are actually going in a particular direction, but they are constrained. I also think there are huge pressures and difficulties inside the LEA, the vision bit has gone.

He went on to mention two issues, first raising awareness among all stakeholders and second to build on the measures which have been already started. Comprehensive’s Headteacher also pointed to the importance of keeping going with the present programme such as work experience, records of achievement, making the curriculum relevant to industries needs.

“The suggestion is to expand what we’re currently doing within the school organisation, but also to be very aware of the way we can actually use people from business and industry to work alongside our students. In Swindon we have over 200 industrialists who come into schools and work as mentors with young people. We have twenty youngsters here who have a mentorship scheme whereby the people

from business actually work alongside them in defining their targets and so on. I also think that is beginning to happen though the careers service is actually moving the agenda as well, because they are very much looking at the moment at disaffected young people and in the way in which they might best be prepared and fitted to world of work. So I think that the more interaction that there can be between business and education then the greater the understanding will be of actually what's going on in schools and what industry are expecting. But if you're asking me will we move the full school agenda a purely utilitarian curriculum, the answer is no. I do not think that is what we're here to do. (Headteacher of Comprehensive 1)."

The above comments shows some of the directions which might strengthen the relationship between education and economy.

## 9.7 Conclusion

In this chapter the relationship between education and industry has been described. We have drawn attention to the issue of whether the schooling system has kept pace with the neo and post-Fordist forms of organisation. The issues of the anti-education culture and lack of systematic partnership culture as well as the lack of relevance of some aspects of schooling are a matter of dispute in Swindon. From the school's perspective some of the teachers did not feel that GCSE's and A-levels provided industry with key skills. These teachers cited the overloaded curriculum, league tables, an unclear picture of the nature of key skills, and ambiguity in industry about kind of skills they want.

It seems that in Swindon the supply and demand side both agree that raising skills and learning standards are central for economic competition and are beneficial for individuals and society. Although, Rover managers does not believe there is a linear and direct relation between qualifications and workforce capability, they still viewed schools as essential in preparing young people for work. Given the above disagreement between employers, teachers and LEA, in terms of the relationship between education and the economy, it must be recognised that schools simply do not correspond to organisations' needs. Indeed, in contrast to critical theories particularly Bowles and Gintis (1976) correspondence thesis, it is clear from this research that schools and college are not merely reactive institutions, they also have their own history, ethos and interests which actively shape policy.

## 10 Conclusions: The Main Findings

This chapter highlights the research goals and framework of the questions raised in the first four theoretical chapters and summarises the main findings from the field study and their relevance to the theories used.

The theoretical chapters evaluated which theories would be the most appropriate for establishing the key research questions and provided a guide to the case study. To address the theoretical issues a range of theories dating from the mid-seventies to the early eighties (the orthodox technological-functionalist theory, the human capital theory, the conflict theories, the contingency theories and the modified Weberian theory) were analysed to establish the possible nature of the relationship between education and the economy. In terms of economic change, neo and post-Fordist models of economic development were discussed. Brown and Lauder (1997) have argued that neo and post-Fordist models are central to an understanding of the process of contemporary skill-formation and skill-utilisation. Within this framework the thesis examined a series of issues concerning the emerging relationship between skill formation and economic transition; in particular: the change in the organisation of work (neo-Fordist and post-Fordist models) and the different skills these models demanded; the level of consensus amongst stakeholders in schools and industry on the nature of key skills; the functions of key skills in the neo- and post-Fordist economy; the organisation specific and transferability of key skills between various fields and how key skills are taught in organisations and schools; and finally the links

between industry and education, which facilitate the communication of the changing key skill demands of industry.

To answer the research questions an empirical study of Rover was undertaken, focusing on the relationships between education and work. A model was developed to establish the classification of organisations as Fordist, neo-Fordist or post-Fordist. This model was applied to Rover to assess whether Rover is a post-Fordist organisation. Three interrelated aspects of the Swindon Body and Pressing plant were assessed: a) technological change b) organisation of work, and c) human resource development focusing on the selection and recruitment process as well as of the learning and skill development processes, key skills, skill utilisation and ladder promotion.

The data collected were based on interviews from top, middle managers, and shopfloor workers, apprentices, ex-apprentices, Rover Group trainers and from schools: teachers, headteachers, and pupils; observations of the shopfloor as well as participation by the author in meetings and documentation analysis were also included.

The organisation of work at Rover's has undergone considerable change having been influenced by its recent owners: British Aerospace, Honda and BMW. The organisation of work is now based on semi-autonomous teamwork. The author found a gap between the theory underlying the principles of Rover's post-Fordist "New Deal" and practice on the shopfloor. On the one hand, there are good opportunities for promotion which are determined by the following criteria: knowledge of the job;

punctuality; work performance over the past few years; flexibility and capability; problem-solving and being recommended by the team leader for career development.

In terms of selection and recruitment the Swindon Body and Pressing Plant focuses on general skills rather than specific job-related skills, with the emphasis on attitudes, potential in key skills, experience and qualifications. Managers and trainers at the Swindon Body and Pressing Plant claimed that recruitment criteria generally have not changed, although they now place more value on soft skills such as teamwork. However, the view was also expressed that recruits should have considerable 'hard skills'.

It has been argued that in 'post-Fordist' models, workers increasingly require higher levels of preparatory education and continuous opportunities to learn on the job while this was not the case in the Fordist system of work. With Rover using more advanced technology, it is clear that more highly skilled workers are needed. This process of skill development with the emphasis on multi-skilling can be achieved through training schools, colleges and on-the job training. However, on the shopfloor, it was found that the workforce use multi-tasking rather than multi-skilling strategies because firstly workers seem to prefer it and secondly the teams are constructed as semi-autonomous rather than autonomous.

The author hypothesised that key skills including teamwork, communication and problem solving will be used differently in the various types of neo- and post-Fordist organisations but that they would be central to the productive process in a post-Fordist organisation. However, the first major finding of this thesis is that there was no

consensus among the Rover managers, trainers, apprentices and ex-apprentices on the role and utilisation of key skills. The interviews with Rover staff indicated that there is no clarity about the concepts and importance of key skills on the shopfloor: in particular they are unsure about the meaning, nature and role of key skills on the shopfloor while there was a clear endorsement of their role by trainers and apprentices. One explanation for the uncertain position of key skills in the organisation was that Rover has undergone rapid change over the past two decades, especially with respect to takeovers and partnership and that consequently the kind of settled culture needed for key skills to have a clear and established role within the company was absent. As a result, it was difficult for values, standards of judgement and working habits which underlie key skills to be easily transmitted.

The second major finding of this study concerned the nature and relevance of using ideal-type models such as those of Fordism and neo and post-Fordism to identify and distinguish different company strategies. Conditions at the Swindon Body and Pressings Plant did not correspond exactly to either neo-Fordist or post-Fordist criteria as defined by the author's model. If these ideal types are viewed as elements of a substantive theory which suggests that Post-Fordist organisations exist and are at the cutting edge of industry, then they are clearly problematic. Rover is regarded as at the leading edge of British industry in this regard and yet in key respects, e.g., teamworking it does not conform to post-Fordist criteria. However, if the ideal-type models are used methodologically and diagnostically to judge the degree to which an



organisation conforms to the criteria of post-Fordism, as defined in this thesis, then the findings of thesis suggest that it is a useful research tool. Used diagnostically, it helps explain why a company like Rover have not been able to achieve the goals it has set itself in this regard.

The third major finding of this study concerns the relationship between industry and the secondary school sector. Here there were factors, identified by both sides which inhibited closer ties between the two, yet at the same time there was little agreement as to what these factors were, this was especially so in relation to key skills.

There was considerable debate about GCSE results and league tables in creating an academic bias in schools which also left them with little room for manoeuvre when it came to new initiatives like the Key Skills Initiative organised by the EBP in Swindon. Headteachers and teachers raised the issues of the lack of a "systematic culture of partnership" between industry and schools and the issue of changing the school curriculum to accommodate industry's needs. Here, headteachers and teachers expressed concern about the current curriculum because it relies on written outcomes, is inflexible and insufficient attention is paid to the social needs of students and teachers. Teachers argued for more freedom for students and teachers to select courses, programmes and other curricular and extra-curricular activities. Teachers and some of the headteachers argued that a mixture of liberal and vocational education based upon a mutual and flexible relationship between schools and companies is needed.

In this context, they thought that schools could have a role to play in developing key skills. However, since the "generic" elements which are taught in schools still have to be applied to a wide range of contexts, the role that schools could play remains unclear. In schools, key skills are defined differently. Schools are confronted with the following issues. There is: a) no clear understanding of the relationship between the role of schools in developing a more generic or preparatory understanding and that of organisations in developing organisation specific key skills, b) disagreement among schools over which key skills are needed in leading edge companies, while c) the school curriculum focuses on those skills that will enable students to pass GCSE's and A levels and gain entry into university rather than the key skills required in industry. These issues obviously underscore the difficulty of introducing key skills into the school curriculum.

The author therefore concludes that there is considerable tension between education and industry. This tension arises in part because schools are wary about teaching new skills when the demand for academic achievement based on league tables is so high and because the role and value of key skills in production remain unclear even in a leading edge company like Rover.

As this research clearly shows the relationship between education and the economic system is much more complex than talk of 'schools meeting industrial needs' suggests. Indeed, there can be no talk of a new kind of correspondence between education and paid work as it is not clear what industry wants from the education

system in terms of skill formation. For schools, it may be 'rational' that they concentrate on basic academic achievement as the demands for work are so varied between those of neo-Fordist organisations and those of post-Fordist organisations. In the case of Rover, there have been many changes in ownership and control in recent years that have affected the successful embodiment of key skills. In this respect the experience of Rover may arguably reflect those of British industry in general.

This research hopefully serves as a caution to policy makers within industry and schools who work to bring schools and economy more closer. It is a warning that there is no simple and efficient way to improve the links between schools and industry to deliver high skills, when the economy is so varied and uncertain in its skill demands.

### *10.1 Suggestions for further research:*

1. The problematic relationship between education and economy needs to be investigate in order to see whether the findings of this case study are generalisable.
2. Research is needed to explore employees' motivation in learning key skills including the organisational factors that affect workforce motivation to learn and apply key skills.
3. Some schools in these study claim that they teach key skills, therefore more research is required into the effects of this pre-training in preparing young people for learning key skills within organisations.

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#### Appendix 4-1: Demanded Key/core/generic skills

The EUROTECNET technical Assistance Office tried in 1994 to summarise the main elements which constitute core competencies.

Technical competencies( technological and organisational change and development within the enterprise)

Methodological competencies ( cognitive ability, think and decide in a holistic context, computer ability)

Social competencies ( communication, language skills , motivation to discuss working issues with others, new way of Co-operation)

Behavioural competencies( attitudes, values, respect to the economic goals of the enterprise, acceptance of self-responsibility)

Many studies in USA attempt to determine what employers consider necessary skills for successful employment. Baxter and Young (1982) study was to determine the level of need for certain skills or attitudes by high school graduates entering the work force. Results showed that skills related to employee attitudes, communication, and basic knowledge predominated. Employee attitude skills rated the highest were getting along with other people, completing a task, and dependability. Communication skills included written and spoken directions, speaking and listening, understanding what has been read, using basic arithmetic, and thinking and solving problems. Specific job-related skills were rated considerably lower. Beach (1982) cites research indicating that fully 87 percent of persons losing their jobs or failing to be promoted were found to have "improper work habits and attitudes rather than insufficient job skills or knowledge. Murphy and Jenks (1983) interviewed 48 randomly selected employers in the San Francisco Bay area to identify nontechnical traits for successful entry-level professional employment for general studies graduates. They divided skills into three categories: (a) adaptive skills described the manner in which an employee interacts with his/her environment, such as flexibility and tactfulness; (b) functional skills were task related and useful in many jobs and included informational and interpersonal skills; and (c) technical or content-specific skills were specific job-related skills. Nearly 40% of the functional skills responses were in the communication and persuasion category. The most frequently mentioned skills were communication, writing, interpersonal, and verbal skills. The adaptive skills named by employers covered a wide range of attitudes, personality traits, and work habits, with tactfulness the most frequently mentioned skill. In general, employers cited functional skills as part of on-the job training and adaptive skills as crucial to getting the job and remaining on the job. Employers cited three problem areas in the preparation for the world of work: deficiencies in writing, verbal communication, and problem-solving skills; poor work attitudes; and being unrealistic

about the work environment. The majority of employers stated that the determining factor in hiring individuals was their nontechnical skills.

Hazler and Lotto (1987) surveyed 46 employers in western Kentucky, using a modified version of the instrument by Baxter and Young (1980). Results were similar to those of Baxter and Young. Attitudes, including dependability, getting along with others, staying with a task until completion, and recognising the importance of good health, received the highest rating of importance. General skills were rated next, with reading, listening, and speaking receiving the highest ratings. Finally, job-related skills, such as secretarial skills or record-keeping, were rated least important. Employers felt that a majority of specific skills and all the attitude areas needed more emphasis in school.

The Colorado Department of Education (Jesser, 1984) conducted in-depth interviews with 135 Colorado employers and 45 representatives of the military to determine (a) the skills needed for entry-level positions and (b) the degree employers perceived these skills to be present in high school graduates. In general, employers felt high school graduates lacked job-seeking skills, interpersonal skills, basic academic skills, problem-solving/reasoning skills, and communication skills. Welleington (1987) in relation to Employers' dissatisfaction with young job applicants whether is related to primarily inadequate technical knowledge or skill or nontechnical knowledge saying that:

A review of the literature indicated that employers have no quarrel with the skills performance of today's graduates, but they do have serious reservations when it comes to their nontechnical abilities or employability skills (p. 354).

Charner (1988) identified and catalogued the reasons given by employers for not hiring young people for entry-level jobs, including:

Low grades and low levels of academic accomplishments

Poor attitudes, lack of self-confidence

Lack of goals, poorly motivated

Lack of enthusiasm, lack of drive, little evidence of leadership potential

Lack of preparation for the interview

Excessive interest in security and benefits, unrealistic salary demands and expectations

Inadequate preparation for type of work, inappropriate background

Lack of extracurricular activities

and Inadequate basic skills (reading, writing, math) (p. 30).

Natriello in his summary of 14 studies on the needs expressed by employers for entry-level job qualifications, argues: The results of these studies suggest that: 1) employers place greatest importance on employee attitudes, 2) employers emphasise basic skills over job-specific skills, and 3) employers deem it important for workers to have an understanding of the work environment (1989). Kathleen, (1993-94) after summarise findings from different research with employers and the workplace organized them into the three categories of *basic skills*; *higher-order thinking skills*; and *affective skills and traits*, as shown in the display on the table 1.

Basic Skills	Higher-Order Thinking Skills	Affective Skills and Traits
Oral communications (speaking, listening)	Problem solving	Dependability/Responsibility
Reading, esp. understanding and following instructions	Learning skills, strategies	Positive attitude toward work
Basic arithmetic	Creative, innovative thinking	Conscientiousness, punctuality, efficiency
Writing	Decision making	Interpersonal skills, cooperation, working as a team member
		Self-confidence, positive self-image
		Adaptability, flexibility
		Enthusiasm, motivation
		Self-discipline, self-management
		Appropriate dress, grooming
		Honesty, integrity
		Ability to work without supervision

Table1: Calssification of key Skills

In conjunction with employers, educators, and experts in employment and training requirements, American College Testing (ACT) selected 12 generic employability skills--skills crucial to effective performance in most jobs--to form the basis of the Work Keys System (McLarty, *et al* (1994). They are as follows:

reading for information,



applied mathematics, listening, writing,  
teamwork,  
applied technology, locating information,  
observation,  
motivation,  
speaking, learning, and managing resources.

The Employability Skills Profile developed by the Conference Board of Canada indicates the generic skills, attitudes and behaviours that Canadian employers look for in new recruits. Employers need people who have basic academic, personal management and teamwork skills. Furthering the career development of students is a responsibility to be shared by the school, the family and the community (The Conference Board of Canada, 1992). The following list of skills needed for success was compiled by the Corporate Council on Education, a program of the National Business and Education Centre.

ACADEMIC SKILLS	PERSONAL MANAGEMENT SKILLS	TEAMWORK SKILLS
	<p>The combination of skills, attitudes and behaviours required to get, keep and progress on a job and to achieve the best results.</p> <p>Canadian employers need a person who has:</p>	<p>Those skills needed to work with others on a job and achieve the best results. Canadian employers need a person who can:</p>
<p><b>COMMUNICATE</b></p> <p>Understand and speak the languages in which business is conducted</p> <p>Listen to understand and learn</p> <p>Read, comprehend and use written materials, including graphs, charts and displays</p> <p>Write effectively in the languages in which business is conducted</p> <p><b>THINK</b></p> <p>Think critically and act logically to evaluate situations, solve problems and make decisions</p> <p>Understand and solve problems involving mathematics</p> <p>Use technology, instruments, tools and information systems effectively</p> <p>Access and apply specialised knowledge from various fields (e.g., skilled trades, technology, physical sciences, arts and social sciences)</p> <p><b>LEARN</b></p> <p>Continue to learn for life</p>	<p><b>POSITIVE ATTITUDES AND BEHAVIOURS</b></p> <p>Self-esteem and confidence</p> <p>Honesty, integrity and personal ethics</p> <p>A positive attitude toward learning, growth and personal health</p> <p>Initiative, energy and persistence to get the job done</p> <p><b>RESPONSIBILITY</b></p> <p>The ability to set goals and priorities in work and personal life</p> <p>The ability to plan and manage time, money and other resources to achieve goals</p> <p>Accountability for actions taken</p> <p><b>ADAPTABILITY</b></p> <p>A positive attitude toward change</p> <p>Recognition of and respect for people's diversity and individual differences</p> <p>The ability to identify and suggest new ideas to get the job done creatively</p>	<p><b>WORK WITH OTHERS</b></p> <p>Understand and contribute to the organisation's goals</p> <p>Understand and work within the culture of the group</p> <p>Plan and make decisions with others and support the outcomes</p> <p>Respect the thoughts and opinions of others in the group</p> <p>Exercise "give and take" to achieve group results</p> <p>Seek a team approach as appropriate</p> <p>Lead when appropriate, mobilising the team for high performance</p>

Table 2: Employability skills profile: The Critical skills for Canadian employers(The Conference Board of Canada, 1992).

In other side of the world namely Australia and New Zealand key skill debate also attracted researchers attention. Cumming (1987) argued that during the last few years in Australia, a degree of common ground has emerged between educators and employers. Based upon these agreement it is possible to identify a set of shared objectives for young people. The common objectives have been stated as follows (table 3):

Attitudes:	Attributes	Knowledge	Skill
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Motivation Corporation	Responsibility Adaptability Flexibility	Work (Occupation)  Wok (General)	Basic (Including Oral Communication)  Problem Solving  Decision-Making  Learning To Learn

Table 3: Key skills in Australia

Meanwhile, Hill, *et al* (1998) in New Zealand studied five organisations that introduced initiatives such as TQM and Learning organisation concepts as a result of facing a business environment of continuous change and uncertainty. In the light of key skills they asserted that instead of focuses on technical (hard) skills, industry looking for communication, and relationship-building and maintenance (soft) skills, because they are at the core effective team problem solving and innovation in environments of uncertainty.

The East Kent ITEC (1995) based on analysis of industry announced the following key skills as an important area for training and investment.

Communication

Information Technology

Application of Number

Personal Skills - Improving Own Learning

Personal Skills - Working With Others

Problem Solving

A review of the overall Education, Training and Skills situation in the UK IT, Electronics and Communications industries was carried out for the FEI from July to September, 1995. The Study was carried out by interviews with officials of the vast majority of the national institutions with a role in this area, including government

departments, Industry Training Organisations and sector Lead Bodies, Engineering Institutions and Employers' Bodies, as well as key researchers. In addition there was a backup activity in information gathering and desk research (FEDERATION OF THE ELECTRONICS INDUSTRY, 1995)

The Key Findings of the Study are:

- (i) Real evidence of specific technical skills shortages in terms of recruitment difficulties is elusive, and employers' skills needs also cover non-technical skills and certain skills shortfalls within the existing staff;
- (ii) Fundamental changes in the market environment of ITEC companies have resulted in considerable upheavals in their Human Resource needs.

The two Key Messages are: Whilst there is a question about the abilities of Small and Medium-sized Enterprises in this area, large companies will, and should, carry out their own specific technical training. Employers' greatest skills needs appear to be in the non-technical area, covering teamwork, business sense, flexibility, the ability to think creatively and solve problems, and the ability to learn fast and effectively.

The study of "the skills audit" by UK's Department of Education and Employment on "what are the skills that employers say they want" showed that following skills are required by employers (The skills Audit, DfEE, 1997):

intellectual and analytical skills- essentially the ability to think, reason and solve problems;

occupational skills and knowledge relevant to the particular job, occupation or industrial sector;

basic skills of literacy and numeracy;

applied core skills of communication and number, the ability to handle information technology, to work effectively as part of a team, to learn new skills, and to speak a foreign language;

other personal skill, qualities, attitudes and values such as integrity, leadership, confidence, creativity, self-reliance, flexibility, energy, entrepreneurship, effective use of resources, and a customer focus;

general knowledge and awareness about the world of work and business.

When employers say they want core skills they are usually referring to skills such as: communication, application of number, information technology, improving own learning and working with other. Apart from these main key skills, employers also using a number of personal qualities. Some of them can not easily standardised and measured, such as honesty, integrity, enthusiasm, obedience, energy, common-sense, loyalty, intelligence, and self motivation (The skill audit, 1997).

However, the key skills identified by different researchers vary considerably in the way they are organised. They have some common element which summarised in figure 1.

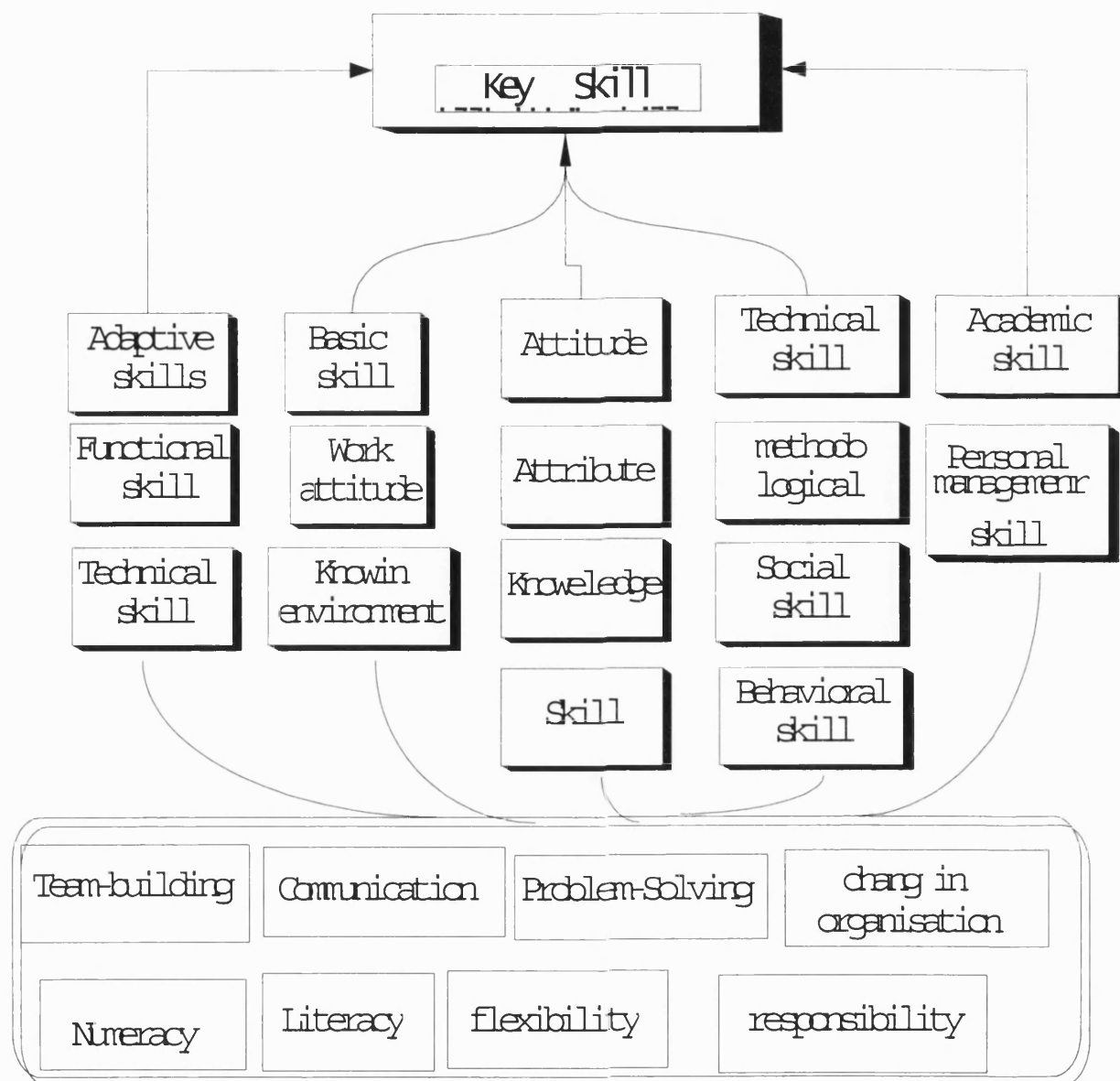


Figure1: Classification of Key/generic skills from different point of view

Appendix 5-1: A chronology of key meetings and other events related to the development of key skills in Swindon

Meeting	Participants	Poistion	subject
1	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Bath University</li> <li>• Bath University</li> </ul>	Discussion regarding the Rover group Action plan for Key Skills  <u>20-06-1997</u> <u>1-3 pm</u>
Rover Partnersh ip Center			

Meeting	Participants	Poistion	subject
2	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Business, Education Authority Liaison</li> <li>• Rover Strategic Business Management</li> <li>• Teacher</li> <li>• School Teacher</li> <li>• Bath University</li> </ul>	<ul style="list-style-type: none"> <li>• Action Plan for Careers, Recruitment and the World of Work 1997-98</li> </ul> <u>01-10-1996</u> <u>4-5.30 pm</u>
Rover Partnersh ip Center			

Meeting	PArtsipants	Poistion	subject
3	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Business Liaison Manager</li> <li>• Bath University Faculty Member</li> <li>• vice-chancellor of New-College of Swindon</li> <li>• Consultant</li> <li>• Young Scott Associates</li> <li>• Kingsdown school</li> <li>• Bath University</li> </ul>	<ul style="list-style-type: none"> <li>• Key skills Task Group, Swindon Technology Proposal, Staffing Training, Rover Skills for Adults, Developing and delivering packs of team-building and problem solving,</li> </ul> <u>9th-10-1997</u> <u>4-6.30 pm</u>
Richard Jeffeies Building of New College			

Meeting	Participants	Poistion	subject
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4 Rover Group Partnership	<ul style="list-style-type: none"> <li>• Rover partnership Manager</li> <li>• Principal of New College</li> <li>• Rover Manager</li> <li>• Rover Manager</li> <li>• University of Bath</li> </ul>	<ul style="list-style-type: none"> <li>• Action Plan for Skills Training with and for Teachers</li> </ul>
		<u>15-10-1997</u> <u>4.15-6 pm</u>

Meeting	Participants	Position	subject
5  Rover Partnership Center	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Rover QA Manager</li> <li>• Rover QA Manager</li> <li>• University of Bath</li> </ul>	<ul style="list-style-type: none"> <li>• Discussion regarding the Rover Quality Assurance</li> </ul>
			<u>20-10-1997</u> <u>4.15-6 pm</u>

Meeting	Participants	Position	subject
6  Drove Center	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Young Scott Association</li> <li>• Warnford School</li> <li>• Kingsdown School</li> <li>• 3rd Age Challenge</li> <li>• St Joseph's School</li> <li>• Kingsdown School</li> <li>• New College</li> <li>• University of Bath</li> </ul>	<ul style="list-style-type: none"> <li>• Key Skill Meeting</li> </ul>
			<u>06-11-1996</u> <u>4-5.30 pm</u>

Key skills and lifelong learning Conference, Godard Hotel, 24 November 1997, Participant List

Meeting	
7 Godard Hotel,	Partnership Centre Manager, Rover Churchfields School Commonweal School Highworth Warnford School Kingsdown School 3rd Age Challenge Manager Business Liaison Unit, Swindon Borough Council Education Services Governor Support, Swindon Borough Council Education Services



Key skills and lifelong learning Conference, Godard Hotel, 24 November 1997, Participant List

Governor, Churchfields School  
 Principal Officer, KeySkills, QCA  
 Governor, St John's School Marlborough  
 Governor, The Ridgeway School/Chair, Swindon  
 Association of Governors  
 Operations Director, Allied Dunbar  
 St Joseph's School  
 Business Liaison Officer, Swindon Borough Council  
 Education Services  
 St John's School, Marlborough  
 Pinehurst Junior School  
 3rd Age Challenge  
 Headlands School  
 Group Manager Client Services Division, Allied  
 Dunbar  
 Trident Director, Swindon Borough Council Education  
 Services  
 Highworth Warneford School  
 University of Bath, Department of Education  
 University of Bath, Department of Education  
 Crowdy's Hill School  
 Kingsdown School  
 Community Service Volunteers, Governor Crowdy's  
 Hill School  
 New College  
 Bluebird Toys  
 Highworth Warneford School  
 Crowdy's Hill School  
 Wootton Bassett School  
 The Ridgeway School  
 Chair Swindon EBP/Resourcing Manager, Allied  
 Dunbar  
 Wootton Bassett School  
 Headlands School

Meeting	Participants	Position	Subject
g			

8	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Training counsellant</li> <li>• Private Counsellant</li> <li>• University of Bath</li> </ul>	<ul style="list-style-type: none"> <li>• Study pupils views about the schools</li> <li>• Give positive attitude to pupils</li> </ul> <p><u>04-12-97</u> <u>1.30-4 PM</u></p>
Rover Partner ship			

Meeting	Participants	Position	subject
9	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Private Counsellant</li> <li>• University of Bath</li> </ul>	<ul style="list-style-type: none"> <li>• Alternative Curriculum Project</li> </ul> <p><u>05-12-97</u> <u>1.30-4 PM</u></p>
Rover Partner ship			

Meeting	Participants	Position	subject
10	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Burneh Castrol</li> <li>• Rover Manager</li> <li>• Life time Career</li> <li>• LEA</li> <li>• Education Buisness Liasion Manager</li> <li>• University of BATH</li> </ul>	<ul style="list-style-type: none"> <li>• Team Building</li> <li>• Solving Problem</li> </ul> <p><u>12-12-97</u> <u>1.30-4PM</u></p>
Rover Partner ship			

Meeting	Participants	Position	subject
11	•	<ul style="list-style-type: none"> <li>• Educational Partnership Manager</li> <li>• Training Counsellant</li> <li>• Private Counsellant</li> <li>• University of BATH</li> </ul>	<ul style="list-style-type: none"> <li>• Study pupils views about the school and Curriculum</li> <li>• Give positive attitude to pupils</li> </ul> <p><u>12-12-97</u> <u>1.30-4 PM</u></p>
Rover Partner ship Center			

List of participants in meetings and interviews in Swindon Education Business Partnership- Key Skills Initiative

Name	Poistion
	<ul style="list-style-type: none"> <li>• Directing Manager of RBP</li> <li>• Personal Manager of RBP</li> <li>• Skill Development Manager of RBP</li> <li>• Rover Manager</li> <li>• Rover Manager</li> <li>• Rover Manager</li> <li>• Allied Dunbar Manager</li> <li>• Allied Dunbar Manager</li> <li>• Allied Dunbar Manager</li> <li>• Allied Dunbar Manager</li> <li>• Allied Dunbar Manager</li> <li>• W H Smith Manager</li> <li>• Burmeh Castrol manager</li> <li>• Burma Castrol Manager</li> <li>• Burma Castrol Manager</li> <li>• Life time Career manager</li> <li>• WiltshireLEA</li> <li>• Wiltshire LEA</li> <li>• Education Business Manager</li> <li>• Dorcan School</li> <li>• Bradon Forest School</li> <li>• Wiltshire TEC</li> <li>• Kingsdown School</li> <li>• Headteacher of Kingsdown School</li> <li>• Headteacher of Herod Parkway</li> <li>• Thamesdown Borough Council</li> <li>• Wiltshire LEA</li> <li>• Wiltshire LEA</li> <li>• Young Scott Association</li> <li>• Warnedford School</li> <li>• St Joseph,s School</li> <li>• Kingsdown School</li> <li>• 3rd Age Challenge</li> <li>• 3rd Age Challenge</li> <li>• Career teacher</li> <li>• Private Counceltant</li> <li>• Teacher</li> <li>• Teacher</li> <li>• Teacher</li> </ul>

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4    Appendix 5-2: Sample of the Rover’s Apprentices, Ex-apprentices, and Trainers

5    Technician Apprentices

N	name & Surname	Age	Qualification	Started-Finish	Education achived
1.		18	• B-Science, C-Technology and Desig, D-MAth	97-2001	NVQ level 2
2.		22			

N	name & Surname	Age	Qualification	Started-Finish	Education achieved
3.		20	<ul style="list-style-type: none"> <li>• A-math, C-Scie,</li> <li>• City and Guild level 3, basic experience with engineering</li> </ul>		
4		21	<ul style="list-style-type: none"> <li>• GCSE ; Math -C; Science, C</li> </ul>	96-2002	NVQ level 2
5		18	<ul style="list-style-type: none"> <li>• 8 GCSE above C, 2 A level( Business and Art &amp; Design);work experience 3 years</li> </ul>		
6		19	GCSE		
7		19	<ul style="list-style-type: none"> <li>• GCSE</li> </ul>	95-99	NVQ level 2
8		20	<ul style="list-style-type: none"> <li>• GCSE</li> </ul>		
9		22	<ul style="list-style-type: none"> <li>• A leve</li> </ul>		
10		19	<ul style="list-style-type: none"> <li>• Alevel</li> </ul>	94-98	NVQ level 2
11		18	<ul style="list-style-type: none"> <li>• A level</li> </ul>		

### Enigneering Apprentices

N	name & Surname	Age	Qualification	Started-Finish	Education achieved
1		18	GCSE (Work Experience)	97-2001	NVQ2
2		18	Alevel		
3		19	Aleve		
4		18	<ul style="list-style-type: none"> <li>• C-Math; C- Science,</li> </ul>	96	C&G
5		18	One week training in a garag	-	C&G

N	name & Surname	Age	Qualification	Started-Finish	Education achieved
6		19	<ul style="list-style-type: none"> <li>D-math; C-Science;</li> <li>C&amp;Guilt part 2, weak on GCSE</li> </ul>	2000	C&G
7		20	<ul style="list-style-type: none"> <li>A leve college (two years)COMMERCIAL SUBJECT</li> </ul>	95	GNVQ
8		21		1998	GNVQ
9		21	<ul style="list-style-type: none"> <li>GNVQ college- one years workexperience.</li> <li>GNVQ</li> </ul>		ONC
10		21	A-level	94-1998	C & G
11		21	A-level	94-98	C & G
12		24	<ul style="list-style-type: none"> <li>Three years college-OND-3 years workexperience</li> </ul>	1994	C & G
13		23	<ul style="list-style-type: none"> <li>Three years college-OND-2 years workexperience</li> </ul>	1998	
14		20	<ul style="list-style-type: none"> <li>GCSE; Scince-C; Math-C; Desgin-B; 2 weeks workexperience with British morors</li> </ul>	94-98	C &G
15		20			C & G
16		20	<ul style="list-style-type: none"> <li>GCSE same above; 2 weeks workexperience electrical company</li> <li>GCSE same as above; workexperience during</li> </ul>		C & G

N	name & Surname	Age	Qualification	Started-Finish	Education achieved
			the school		
17		20	<ul style="list-style-type: none"> <li>GCSE; Math, C; Science C-work experience in office</li> </ul>	94-98	C&G

### Business Apprentices

N	name & Surname	Age	Qualification	Started-Finish	Education Achieved
1		20	A-level	97-2001	HNC
2		20	A- level	97-2001	HNC

### Ex-Apprentices

N	name & Surname	Age	Qualification	Scheme	Started-Finish
1		23	<ul style="list-style-type: none"> <li>Math-B; Science-B; English- B; BETC (after finished school I went one year on college on computer)</li> </ul>	Eng	1994-98
2		23	<ul style="list-style-type: none"> <li>MATH-B; Scien-C; English-C; Work experience</li> </ul>		
3		22	Two years college (Mechanical Engineering)	Mainte Eng	1994-98
4		23	A level	Tool maker	1993-97
5		24	GCSE work experience	Tool maker	1993-97

N	name & Surname	Age	Qualification	Scheme	Started-Finish
6		24	A leve	Technician	1993-97
7		24	GCSE	Eng	1994-98
8		23	GCSE	Technician	1993-97
9		23	A level	Tech	

#### Trainers

Name	Age	Qualification	Job	Experience
	22	start with GCSE after school and had seen apprenticeship for 4 years,1988 apply1989 get the job	Engineering trainer (electrical mechanical fitness)	3 years
	28	GCSE; C, Math, B, Psychology, C, Science, two weeks work experience, and experience with skills club	Engineering training officer	7 years
	24	GCSE	Electrical Trainner	4 years

#### Appendix 5-3: Headteacher and teachers interview questions

1. Could you please talk about the relationship between school and local industry in Swindon?



2. Is there consense among industry in swindon in what kind of skills they are looking for?
3. To what extent should your school provide skills for industry needs?
4. would it help pupils to know which skills are of value to different industry, how you get this information from industry, and how do you bring them in your daily curriculum courses?
5. Are there any tension between what schools doing and what industry wanted?Howmuch there is fit between what industry want and what school system teaching?
6. Do your school develop key skills ?What is the contribution of schools in developing KS?
7. Which subjects school thought were useful in helping to develop KS -Team work, communication and problem solving?
8. In what way GCSE prepare pupile for the KS?
9. How do you get information from the labour market to find out about your pupil performannce?
- 10.With what industry do you have communication to send pupiles for getting work experiences?

#### **Appendix 5-4: Apprentices Interview Questions**

1. Can you tell me about the training you receive here at Rover?
2. First year (courses, houres , Methods of teaching, Assesment) ? (Second year,Third year,Fourth year)
3. What are the most important aspects and the key issues of training you receive ? can you talk a bit about that?
4. Have you received training in Team-building,IT, Problem-Solving,..? If so, Could you please talk a bit about these ?
5. why important do you think these are?Why do Rovers need these skills?
6. Clearly some pupils would be better than others how did Rover do to help you getting better knowledge and learning of generic skills and work-related attitudes ?

7. Motivate pupils and High expectations for learning is important :Does your Teachers or trainners hold high expectation for pupils?
8. Could you tell us how do you learning key skills most? (Practice alone; practice with supervision; figuring things out form myself; being told what to do; watching someone else doing the job; thinking about what I have done; learning from qualified workers)
9. What kind of abilities (math, scie,,...) are commonly need improvment when you came to rover?
10. How much your training focused on integrating academic and vocational education?
11. How much did School or FE prepare you for training in these key skills? how much of preparation should take place in schools, college and work?
12. Do you think Rover should spent more effort (time, money resourses..) into apprentices training?
13. Why have you chosen this career ? What encouraging you most to apply to Rover?
14. How were you recruited into this position? Which factors were important in your recruitment at Rover? with what qualification you came here? Have you had any experience of workleaving school or FE?
15. In relation to other jobs in Swindon, does working at Rover give you a certain status?
16. Do you think you will ever be unemployed? why ?
17. Do you think you will still be working at Rover in five years time?
18. Please comment, as much as you feel able, on what pupils should know and be able to do as they leave school and enter the world of work?

#### Appendix 8-1: Rover Group Car Manufacturing- Swindon Body and Pressing Plant

Rover Group Key skills- Swindon Body and Pressing plant (10th Sep-1997)

Key Skills	Characteristics
<b>PROBLEM SOLVING</b> Using a systematic approach to identifying and resolving of problems in many situations	Identify the problem. look for the root cause to the problem. seek information which either confirms or rejects the root cause using facts, figures, views, opinions, products, etc.

	<p>look for options which resolve the problem.</p> <p>determine the reasons for selecting the best option.</p> <p>implement the best option.</p> <p>check to see if it works.</p> <p>monitor what happens over a period of time to ensure the problem does not re-occur.</p> <p>if unsuccessful, returns to previous options and follows the same process.</p>
<p><b>WORKING WITH OTHERS AND TEAMWORKING</b></p> <p>To be able to contribute, with others, to the production of an end product or service</p> <p>which is delivered on time and to an acceptable standard</p>	<p>Everyone: - will have a clear understanding of what they have to achieve.</p> <ul style="list-style-type: none"> <li>- understands their role in achieving the goals or targets.</li> <li>- knows the steps and end dates when things have to be done and where.</li> <li>- is involved and responsible for the quality of what they do.</li> <li>- knows their strengths and weaknesses and can explain how they can best contribute.</li> <li>- has the information and resources for them to complete the task.</li> <li>- supports the other members of the team and will adapt their contribution to ensure the task is completed on time and to the standard required.</li> <li>- plans and agrees the activities of the team or partnership.</li> <li>- works to agreed deadlines and honours their commitments.</li> <li>- review progress regularly and honestly reports on their individual activities.</li> <li>- informs the rest of the team of any difficulties they have met as soon as they occur which could effect the final outcome.</li> <li>- reviews regularly how they are operating as a team or partnership and takes steps to improve relationships and working practices.</li> <li>- experiments with new ideas and tries something before rejecting it.</li> <li>- to resolve conflict within the team or partnership.</li> </ul>
<p><b>COMMUNICATION</b></p> <p>To be able to extract information from oral or written sources.</p> <p>To be able to convey that information to a partner or team in a clear concise manner either orally or in an appropriate written format</p>	<p>Individuals will be orally:</p> <p>contributing to discussions by offering information, asking for information or exchanging ideas with a</p> <p>partner or group of people.</p> <p>developing an argument and presenting it clearly.</p> <p>confirming understanding of the subject and asking questions to clarify understanding.</p> <p>actively listening to and responding to the contribution and opinions of others.</p> <p>encouraging the contribution of others to the discussion.</p> <p>demonstrating awareness of the impact of their personal style on others.</p> <p>discuss straightforward and complex subjects.</p> <p>summarise information or the discussion content.</p> <p>talk on unfamiliar subjects and with unfamiliar people.</p> <p>using images where appropriate to aid their discussions.</p> <p>Individuals in writing will be able to:</p> <p>write about both straightforward and complex subjects not only for people who they know and who know the</p>

	<p>subject but also for people who they do not know and who are unfamiliar with the subject.</p> <p>use accurate information relevant to the subject extracted from sources of straightforward and complex information</p> <p>that include text, text illustrated by images and images supported by text.</p> <p>use information sources either provided for them or sought out by them to clarify their understanding of the subject.</p> <p>use a style and format that suits the audience and purpose of the communication e.g. memo, letter, report..</p> <p>presentation</p> <p>produce a summary of information.</p> <p>use correct spelling, grammar, punctuation and appropriate layouts to emphasise the meaning of their communication.</p> <p>follow present formats and outlines and produce their own freely structured work.</p> <p>; illustrate their work with appropriate images e.g. sketches, photographs, diagrams, maps, charts, videos, etc.</p>
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#### Appendix 8-1.1: Rover action plan for recruitment of young people

Harvey Leach propose a list of possible projects that group can use as an idea. He added that this list need to develop an idea of the knowledge/skill level for each one .

##### Commercial “Partnership Projects”

##### Marketing(suitable for business studies etc)

- Research market place for press Tooling. Devise a methodology, establish sources of information, determine customer requirements etc.

##### Admi, possibly with IT content

- Creation of a databse of calendarised investment data for project agreed milestones. Could expand into a process to determine timing for key project action.
- Establish a database for electronic numbering and recording of enquiries.

Devise a development management process for the team-standardised manual and electronic file storage, record retention practices etc.

##### Stores Management Process

- Non-productive stores-study items stocked, organisation of stores, customer volumes, service levels, age of stocks, deliveries in etc. with a view of redefining procedures.

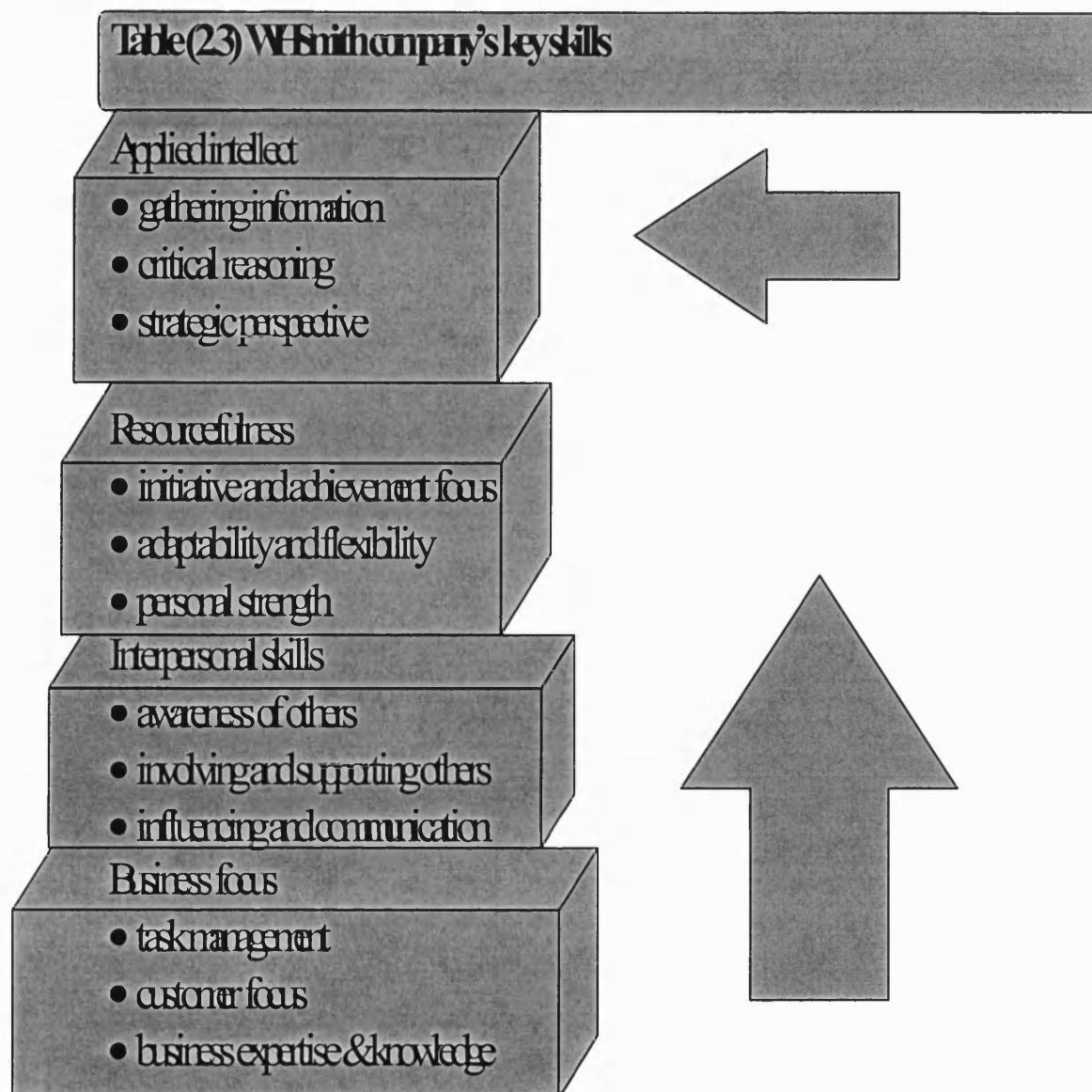
Steel stores- look at the delivery patterns, storage areas, size of coil vs.usage, cranes, storage methods etc.

- Ideas for the involvement of Rover Assosiates in GNVQ Business( Advanced)
1. Units 6,7 and 8-Small business-particularly financial aspects, but could be an overall adviser.

2. A marketing project involving Rover- a real piece of work rather than a simulation- could be part of unit 3.
3. for unit 4.3- involvement in the recruitment process eg. Advise on making applications, acting as interviewer and interviewee, allowing pupils to apply for a real job and interviewed and evaluation of the interviews
4. Unit 6.1, 6.3 and 6.4- Money and trade cycles, costs and break-even pupils work on a case study from Rover with an Associate.
5. Key skills:
  - IT- Associates could assist in this work in either separate projects or the pupils assignmentwork.
  - Communication-eg.Presentation skills.
  - Application of number-eg. A project fromRover that the pupils could work on with an Associate.

#### **Appendix 8-2: W H Smith company and key skills**

W H Smith is a major high street retailer with its head office in Swindon and a training department in Abingdon. The company was undergoing a major restructuring and subsequently the training department has reduced in number and transferred to Swindon along with a number of employees from London office. The company places considerable emphasis on training and a high priority on skill development, particularly communication and working with others. WHSmith managers explained the situation at W H Smith - there are many new people in new roles and many issues both long and short term to be considered. They have a lot of development work to do with staff in the short term. Competencies have been scrapped and new ones now have to be created. At present the company is more concerned with the immediate practical training needs internally, rather than longer term developmental needs. There is therefore not much overlap at present and not much available resource either. The following competencies which reported to the Education Business Liaison Management are currently used by WHSmith for recruiting graduates to the general Groups management Training Scheme (WHSmith, 7 Feb. 1997).



W.H. Smith, Kingsdown School and Dorcan School : Working With Others .

As part of the Swindon Key Skills project the company decided to use its expertise in developing the skill of working with others, and to complement the other programmes it was agreed to involve Year 9 students from two Swindon schools. Initial discussions with the project leader in the company, Jane Stones from the Community Affairs Department; Viv Long, a company training consultant; and Richard Cummins, Swindon LEA, identified the following aim and objectives. Aim To develop the skills of working with others in a group of 24 Year 9 students from Dorcan and Kingsdown Schools. Objectives were to develop and practise communication skills, to develop negotiation skills, to develop listening skills, to identify and harness individuals qualities and skills,

to develop an understanding of problem-solving skills. Considerable time was spent developing a programme to achieve these objectives and details appear elsewhere. However a number of key points were identified:

- The students should be of mixed ability and roughly equal numbers of male and female.
- The students would work in 4 groups of 6 throughout the day.
- Students would be thoroughly briefed before the day.
- Teachers and W.H. Smiths employees would act as process observers, one per group.
- The programme would take place on company premises and would last a full day.
- Evaluation of the day would contribute towards the overall Swindon key skills programme. (Working With Others)

Once the programme had been developed the teachers and W.H. Smiths employees were briefed and the students prepared for the day. The day was a mixture of input and activity with two groups operating in separate rooms and coming together periodically. The majority of the inputs were by Viv Long with support from Jane Stones and Richard Cummins, but the majority of the day was spent with the students working in their groups with the observers facilitating the feedback sessions.

### **Appendix 8.3: Allied Dunbar company and key skills**

Allied Dunbar which is a big company and who have their head office in Swindon employing some 2000 people involved in Insurance and other public services. Stephen who works in Group Manager Client Services Division, said based on the experience with more than 2000 workers in Dunbar, Manager attitude and performance of employees at different levels of job, our requirements are introduction of new key skills. Then he explained what kind of skills are more desired by Dunbar as follows.

- team work
- service orientation/ clients
- communication
- flexibility/ adaptability

- production/technical knowledge
- planning and organisation
- analysis and problem Solving

Team work identified as Barbara Duthie(manager) explained that there was a great deal of overlap in their training needs and Allied Dunbar is focusing on core skills, currently communication,presentation, influencing others and team working. She has training materialsat key stage level 3 which need only a small amount of adapting before they would besuitable for education.

#### Allied Dunbar Core competencies(6th-Feb. 1997)

Core competencies	
Leadership	Sharing a vision Entrepreneurship managing Performance
Innovation	Thinking Creatively and Practically Embracing Change market led
Communication & influencing	communicating influencing others
Goal orientation	Planning delivering
Thinking	analysing taking Decisions
Team-work	collaboration Team facilitation
The brand personality	Brand Behaviour Client Service
Professional ability	Business understanding Functional Expertise

Allied Dunbar Presentation Skills : Following a number of requests from schools, Allied Dunbar, were approached to discuss how a presentation skills programme might be developed. The company has its own programme for direct employees and associates, and this was used as the basis for a programmes to be developed for students in Key Stage 4. Initially discussions took place between Elaine Canniffe, Training Consultant with Allied Dunbar, and Richard Cummins, Wiltshire LEA Advisory Service. Allied Dunbar has its main offices in the centre of Swindon but also has a modern training



centre nearby and it was decided to use this as the base for the initial pilot. Programme Development Examination of the Allied Dunbar course confirmed that in essence it would meet the needs of the schools and their students, but would require some amendment. The existing course objectives focused on an understanding of structure, planning, delivery and use of visual aids, participants receive input and the opportunity to practise. In addition LEA added some further objectives as follows: to enhance general communication skills, to develop problem-solving skills, to improve the ability to work with others, to increase self confidence, to raise awareness of a business environment, to highlight skills transferability, to learn how to give and receive feedback.

Initially a few schools were invited to participate in a pilot programme with a maximum of 30 students per school. The teachers met at the training centre and were briefed by Elaine Canniffe who was delivering the course, and dates were negotiated by each school. Finally the courses took place during the summer term with evaluations by students, teachers and observers. The programme was overwhelmingly well received and only minor adjustments have been made to subsequent programmes. To date some 10 schools and over 800 pupils have taken part. The programme evaluated very successful and it was expected that annually involves 9 or 10 schools and up to 300 students. Apart from the benefits of the course itself, students appreciated the opportunity to work in a business environment with business trainers. In some schools the course has been built into the Year 10 curriculum but is still something of a bolt-on in others. Where students are fully prepared and teachers carry out follow-up work back at school the benefits are greater and longer lasting. Some schools have identified specific training needs amongst staff in developing presentation skills. Finally there is an issue about entitlement as only 30 students from each school have the opportunity to take part. The consortium was decided to addressing this and as well as training teachers additional companies are being invited to take part so that all Year 10 students will benefit. Because of some logistical difficulties in transporting students to the training centre it was hoped that some of these companies would be linked with their local school. The programme was seen as one of several key skills which will be increasingly important to young people and Allied Dunbars commitment to the programme demonstrates their own recognition of the importance of communication skills generally amongst its own employees.

Gary Web confirmed that the present commitment of Allied Dunbar to provide Presentation Skills training would continue, as would support of 'ad-hoc' events. He is still concerned with trying to find ways to expand this throughout the company and is considering presenting the involvement with schools as an opportunity to develop staff rather than as merely a request to support school activity. Suggested it might be helpful to put together a paper on "win-win" opportunities for education and companies.

#### **Appendix 8.4: Burma Castrol company and key skills**

The Burma Castrol programme also addresses presentation skills. The pilot involved twelve Year 9 students and twelve Year 12. The context was Art and Design as the older students are doing a GNVQ course and the younger ones will be involved in a National GNVQ Part 1 pilot in September. The course lasted for one day and was held at Burma Castrol. Julia Norman (manager of Burma Castrol) said our company interested to joined the programme of team building and problem solving.

#### Presentation Skills Within a GNVQ Context

Wiltshire LEA has developed a support network of GNVQ Development Groups across the county along with training and support programme. Over a period of time schools and colleges identified a need for support in delivering and assessing key skills. In response to this an approach was made to the Training Department of Burma Castrol, initially to canvas opinion and to share ideas. Burma Castrol responded positively to this and it was agreed that Julie Norman, a training consultant with Burma Castrol, and Julie Cathcart and Richard Cummins from Wiltshire LEA would work together on a communication skills programme, focusing on presentation skills. The company does have a presentation skills course for its own employees but it was felt that it would be inappropriate to amend this and that a new course should be designed specifically for GNVQ students.

It was agreed to invite Year 12 Art & Design students from Wootton Bassett School and Year 9 students from St Edmunds School, who would be starting a Part 1 course in September. It was recognised that this would be quite a challenge, given the differences in age and experience. Although the course would have an emphasis on presentation skills there would be an opportunity to work with others and it was agreed to build this into the course design. In terms of programme development the course was being aimed at Art & Design GNVQ students so an element was identified which could be addressed as part of the course. The students would also require input about presentations and the opportunity to practise. The focus in the morning would be presentation skills and the afternoon Art & Design, culminating in a full-scale formal presentation. Course Objectives were to establish an understanding of the key elements of a presentation, to develop knowledge and understanding of how to plan a presentation, to increase the students skill levels in making presentations to both large and small groups, to provide an opportunity for the students to have their achievements recognised, in relation to the appropriate national key skills criteria (as required for GNVQ). This programme is designed for a group of 24 - 30 students working throughout the day in teams of 4 or 5. Inputs were made by the Burma Castrol trainer and each team of students had a process observer attached to them who debriefed each activity.

The impact of working in a company environment with input from a business trainer evaluated significant by LEA. The students made great efforts with their dress and had the opportunity to mix with company personnel at lunchtime. The working facilities and resources were impressive and the students talked positively about the experience for weeks afterwards. They were challenged throughout the day both in the tasks set for

them and in adjusting to work with students from another schools. The teachers gained from the opportunity to experience a focused and structured training day led by a business trainer. They were able to see how a course element could be delivered within a business setting at the same time as addressing two key skills. With the support provided they were able to gather evidence and assess the students. Finally the day led to a considerable amount of follow-up work at school and has continued to provide a useful reference point.

### Appendix 8.5: LEA and Schools policy on key skills

LEA and some of the schools approach the issues of key skills from two ways a) work on thier curriculum to develop key skills and b) through pupils work experience, mentoring and teachers placement. Schoolsand LEA representatives in different meetingshave suggested their programmes to introduce key skills in daily school curriculum

Table of key skills valued by the Schools and LEA

School & LEA	Key skills
Dorcan School Kingeston School Bradon Forest School Wootton Bassett School St Edmunds School	Presentation skills were felt to be important for all year groups in English, Drama and Languages. History and Geography departments were interested in team and group working, and the Language and Drama departments also mentioned this as being of particular interest at Key Stage 4 (KS4). The Geography department mentioned problem solving at KS4, while the Science and Technology departments felt this was important right through the curriculum. Also accuracy/quality control skills were mentioned by the Language department.
Local Education Authority (LEA)	Improving own learning and performance Working with others Communication Information technology Application of numbers Problem solving

## **Appendix 8.6 : Proposal for a specialist local education authority initiative for Swindon**

### **1. INTRODUCTION**

1.1 This proposal seeks to develop a model in which all schools, college and the business community within Swindon are able to deliver equality of opportunity, promote positive attitudes to learning and raise achievements through the development of a coherent, whole borough approach to specialist provision across the area.

1.2 This current proposal focuses on technology and illustrates how this might be taken forward. Three specific elements which might be included in a three year development plan are given to illustrate the particular approach to collaborative goal/target setting which has been adopted. It also gives details of the management structure which would underpin it.

### **2. BACKGROUND TO SWINDON**

2.1 Swindon is synonymous with both success and change. In a period of less than fifty years since 1951 the urban area has developed from a primary railway town of 76,000 residents to a major regional centre and unitary borough in which over 100,000 people now work and an estimated 170,000 people live.

2.2 Although much of Swindon's previous growth was based around the railway, over the past twenty years, the town's economy has successfully diversified to support a large number of manufacturing and service based industries. This diversification and growth continues today. For example, since 1991 manufacturing employment in Swindon has risen by 17% compared with declines of -18% and -7% at a regional and national level respectively. Taken together with employment growth in other sectors an additional 7,900 jobs have been created in the borough since 1991, an increase of 9%. This compares with growth of 0.3% and -0.3% in the South West region and Great Britain respectively.

2.3 Strong economic growth has been one of the main reasons for the borough's continued population growth in recent years. Inward migration remains relatively highly fuelled by the many job opportunities in the town. Young couples, many with families are particularly attracted by the many job opportunities available locally.

2.4 This continued migration has led to a distinctively young population within the borough. Coupled with very high activity rates, particularly for women, the town has in recent years seen a dramatic increase in the size of its labour force with a very high proportion successful in finding employment. The local employed labour force has been

swollen by the rapid rise in inward commuting with a significant number of people now travelling to Swindon from the surrounding Counties of Berkshire, Oxfordshire, Gloucestershire and Wiltshire as well as along the M4 corridor.

2.5 Looking ahead, forecasts indicate continued growth in the local labour force with an additional 13,600 people looking for employment by 2007, an increase of 14%. The employed labour force is set to increase at a much greater rate as expected economic growth coupled with the town's excellent communications fuels a further increase in commuting. This and the other developments set to take place within the borough will further consolidate Swindon's role as a major regional economical centre.

2.5 Swindon has the highest number of companies with over 100 employees for a town of its size in the country and its mixed economy means that there are a large number of highly qualified people across all vocational areas working in Swindon. This is a highly valuable resource which companies readily make available to schools and colleges. Most schools and the colleges in Swindon have a close and mutually beneficial working relationship with the local business community.

2.7 There is a thriving education business partnership forum within Swindon in which the Local Education Authority (LEA), Wiltshire Training and Enterprise Council, employers and schools and colleges come together and there is considerable evidence in the town of the already very close liaison between education and industry:

- 2500 Year 10 and 11 students take part each year in work experience placements;

over 150 business mentors from 35 companies are working with Year 11 students in 7 secondary schools;

some 3000 students take part each year in work related activities at the Rover Partnership Centre;

Swindon Borough Council funds a Business Liaison Unit within the Education Service which is unique throughout the whole of the South West of England;

New College has a long-standing Diploma of Higher Education programme in association with the University of the West of England,

high level management programmes and access courses to teaching, nursing and social work;

#### 4.2 Key Skills Development of Young People in Swindon

##### Aim

To raise the Key Skills performance of young people in Swindon.

##### Objectives

1. To train and accredit teachers in Key Skills.
2. Introduce programmes for students which will raise their performance in Key Skills.
3. Through work experience programmes create opportunities for students to practise and gain evidence of Key Skills performance in the workplace.

#### Targets/Outcomes

1. By 2001 25% of all teachers at Key Stage 4 to be accredited at Level 3 in Key Skills.
2. By 2001 40% of all students to be achieving Level 2 in Key Skills by the end of KS4.
3. By 2001 50% of all work experience programmes to have in place a specific Key Skills programmes directly related to the placement.

#### Partners

All secondary schools  
Swindon College  
New College  
Rover  
Motorola  
Allied Dunbar  
WH Smith  
Inland Revenue  
Swindon & Marlborough Health Trust  
Swindon Chamber of Commerce  
Scott Young Associates  
Fosse PR

#### Common Values/Attitudes

1. Commitment to fulfilling potential
2. Willingness and desire to change
3. Willingness to co-operate and collaborate with others
4. Awareness of self, others and consequences

#### Resources

1. Project Manager
2. Expertise of company trainers
3. FE Colleges personnel
4. Training programmes for teachers
5. Accreditation infrastructure
6. Teachers

7. Work Experience Co-ordinators
8. Work Experience hosts
9. Project Trident

#### Performance Indicators

All secondary school staff introduced to national Key Skill structure and evidence requirements.

Selected staff encouraged to produce portfolios for Key Skill accreditation in each secondary school.

3. Assessor training programmes for teachers in Swindon devised and implemented.
4. Opportunities for student portfolio building in selected Key Skills identified within Swindon secondary schools.
5. First cohort of students achieving accreditation in the selected Key Skills.

#### 4.3 Human Resource Development

##### Aim

To improve the performance of staff in schools and colleges through a planned approach to staff development leading to the achievement of Investors in People (IIP) status.

##### Objectives

1. A mutual understanding of the institution's vision and targets by all employees.
2. Identification of the training and development needs of all staff and reviewed against the schools objectives.
3. Effective action to achieve the training and development objectives of individuals and the school.
4. To expand existing model of pairing school with existing IIP company to act as partner and mentor.

##### Targets/Outcomes

1. By 2001 15% of schools to be working towards IIP.
2. All schools to have a staff appraisal system.
3. All schools to have a staff induction programme.
4. Joint Business/Education Training Forum established.

5. All secondary schools to have at least six members of staff accredited with appropriate TDLB Assessor NERIFIER qualifications.

#### Partners

All secondary schools  
 Swindon College  
 New College  
 Swindon Employers  
 Wiltshire Training and Enterprise Council

#### Common Values/Attitudes

1. Self and collective responsibility.
2. Commitment to fulfilling potential.
3. Willingness and desire to change and improve.

#### Resources

1. Wiltshire TEC Officers
2. LEA Co-ordinator
3. Training Programmes
4. Teachers
5. College Staff Development Teams

#### Performance Indicators

1. A School Development Plan which all employers have contributed to and can identify with.
2. A whole school common appraisal system to be in place.
3. Responsibility for developing people has been clearly identified throughout the organisation starting at the top.
4. Targets are set with staff and, where appropriate, linked to achieving external standards.
5. All new employees receive induction training.
6. Managers are actively involved in supporting employees to meet their training and development needs.



7. Businesses throughout the Swindon Education Business Partnership are actively involved in supporting the training and development of staff.

8. Inset focus group from all Swindon schools have been established.

#### 4.4 Development of Information Technology

##### Aim

For the existing Swindon Information Technology Consortium comprising secondary schools, colleges and businesses to work

together to promote more effective development of IT skills in young people across the consortium from Year 7 to 13.

##### Objectives

1. To raise the level of IT skills amongst all young people across the age range and the curriculum.
2. To give accreditation for the IT skills achieved by the award of consortium based certificates.
3. To raise awareness of IT skills amongst teaching staff, further education establishments and local businesses.

##### Targets/Outcomes

1. To develop a consortium wide accreditation scheme based on specific and agreed IT capabilities.
2. All young people across the consortium to be awarded certification for the level of IT skills they have achieved.
3. Recognition of IT skills acquired pre-16 as a progression route into further education and training.
4. IT skills acquired in schools as a means of preparing young people more effectively for further education and training.
5. Development of Swindon Intranet.
6. Staff development in the use of and development of Internet-based learning resources.
7. Development of a model that is capable of reproduction throughout the UK.

8. By 2001 75% of all 16 year olds to be at Level 2, 35% at Level 3.

#### Partners

All secondary schools Swindon College New College Allied Dunbar British Telecom  
Burma Castrol Intel UK Ltd Intergraph Raychem

#### Common values/Attitudes

1. Commitment to fulfilling the IT potential of every young person.
2. Developing self esteem and sense of achievement.
3. Encouraging self-evaluation and setting of realistic, achievable targets.

#### Resources

1. IT facilities in schools to deliver IT skills.
2. Training for staff in schools and colleges to deliver IT skills.
3. Structure within schools and colleges to allow young people to gain accreditation and to progress from one stage to another.
4. High quality certification awarded to young people at each stage of achievement.

#### Performance Indicators

All young people receive IT certificates at the appropriate level for their achievement .

Further education establishments recognise consortium accreditation and have clear progression routes for young people.

3. Employers accept IT accreditation as a valid qualification for employment and further training.

4. Develop the current framework to meet the requirements of accrediting the key skill of information technology.

5. Intranet and Internet actively in use in schools and colleges.

#### 5. A DELIVERY MODEL

## Aim

To manage multi-agency projects within Swindon via an effective and coherent structure which supports the partnership between schools, colleges, business and the wider community including the Local Education Authority.

## Objectives

1. To utilise the already established Swindon Education Business Partnership.
2. To co-ordinate, direct and be accountable for Swindon wide initiatives and projects that enhance the LEA's key principles.

## Targets/Outcomes

1. To build upon the development work of the SEBP steering group, identifying its permanent role, membership and relationship to the Trustee and Executive Committees.
2. To establish a SEBP team of 7 trustees (plus ex-officio Director) with formal constitution and responsibilities, meeting legal requirements.
3. To nominate and elect 8 representatives (plus ex-officio Director) to Swindon Specialist Initiative/Executive Committee.
4. For the Swindon Specialist Initiative to advise the Trustee Committee of current progress and preparing for integration and co-ordination of future initiatives e.g. IIP and IT Competence Certificate.

## Partners

The Local Education Authority All secondary, primary and special schools and colleges in Swindon, including Wootton Bassett and Bradon Forest Swindon College New College Wiltshire TEC Rover Motorola Allied Dunbar W H Smith Inland Revenue Swindon and Marlborough NHS Trust Swindon Chamber of Commerce Scott Young Associates Fosse PR British Telecom Burma Castrol Intel UK Ltd Intergraph Raychem National Power

Nationwide Lifetime Careers and Wiltshire Training and Enterprise Council  
Community representation

Details of the construction of the Swindon Education Business Partnership are given as Appendix 1.

## 6. CONCLUSION

6.1 This paper is intended to provide a statement of commitment on behalf of the

LEA to work closely with all schools, colleges and the business community to work towards achievement of a number of shared goals and targets which it is also believed are the targets which the Government is espousing in "Excellence in Schools".

6.2 It is acknowledged that the proposal in its current state is incomplete and requires considerable collaborative work to be undertaken before it is in a state to be presented as a final submission. This in part reflects the speed with which it has been brought together but hopefully the idea and the way in which it would be tackled are evident from the contents. A full three year development plan would be worked up containing detailed information about aims, objectives, targets, performance indicators and costs if the initiative is pursued. It is to be hoped that the Government would see merit in its officials agreeing these targets and consider providing matched funding for that raised from employers in the Borough in support of this work.

6.3 The Partnership Group would find a steer from Government helpful on whether or not a whole LEA approach would meet favour and receive support. This would enable us to determine if it is worth pursuing our work on this particular initiative or whether we will need to return to the seemingly impenetrable issues which surround selection under the current specialist schools initiative.

## **SWINDON EDUCATION BUSINESS PARTNERSHIP CHARTER**

The main aim of the Swindon Education Business Partnership is:

"To enable partners from education, business and other professional bodies to work collaboratively to promote life-long learning at a local level."

Within its aim the Partnership will seek to promote projects which:

- seek to unlock creative potential in individuals and organisations;
- provide workplace relevance and enrichment to the school curriculum;

- promote key skills and work attitudes and behaviours sought in business and education;
- advance skills and the pursuit of excellence which will promote competitive success in business and industry;
- enhance continuity and progression of learning, training and accreditation 'from cradle to grave';
- inform and create opportunities for partners which will lead to shared learning experiences and opportunities.

There is a key objective to facilitate and promote local education business partnership arrangements and to bring coherence to the range of education/business activities which are being developed within Swindon.

#### SWINDON EDUCATION BUSINESS PARTNERSHIP (SEBP)

##### Advisory Panel Membership

To include representatives from:

- 4 large local employers
- 4 small local employers
- 3 Headteachers from secondary schools
- 2 Headteachers from primary schools
- 1 Headteacher from a special school
- 2 Principals/ Vice Principals from Swindon's Colleges
- 2 representatives from Swindon Borough Council Local Education Authority
- 1 Officer from Education Business Partnership
- 1 Training and Enterprise Council
- 1 Lifetime Careers

Total 21

plus Ex-Officio membership for Director of SEBP

NB Discussions are taking place between the LEA and the Partnership Group about representation from the trade unions.

##### Key Role

- multi-agency forum for discussion and generation of ideas
- forum for networking

- influencing and advising the Trustees of SEBP

## SWINDON SPECIALIST INITIATIVE EXECUTIVE COMMITTEE (SSI)

### Membership to include:

- 4 representatives from local industry
- 3 representatives from the Swindon Association of Secondary Heads (SASH), including one representative from Further Education sector.
- 1 representative from Swindon Association of Primary Headteachers (SAPH)

plus

Ex-Officio membership of Director of SEBP.

### Key Roles

- Action planning and implementation of the identified projects/tasks.
- Co-ordination of all projects/tasks to ensure coherence.
- Monitoring evaluation and reporting for each project.

## Swindon Education Business Partnership

### GENERAL DEVELOPMENT AREA

To manage multi-agency projects within Swindon via an effective and coherent structure.

Supporting partnerships between schools, colleges, business and the wider community, including the LEA.

### SPECIFIC OBJECTIVES

1. To establish a formally and legally constituted Swindon Education Business Partnership.
2. To co-ordinate, direct and be accountable for Swindon wide initiatives

and projects that enhance the LEA's key principles.

## TARGETS/OUTCOMES

1. (i) To build upon the development work of the SEBP steering group, identifying its permanent role, membership and relationship to the Trustee and Executive Committees.
1. (ii) To establish and SEBP team of 7 trustees (plus ex-officio Director) with formal constitution and responsibilities, meeting legal requirements.
1. (iii) To nominate and elect 8 representatives (plus ex-officio Director) to Swindon Specialist Initiative/Executive Committee.
2. (i) For the SSI to assume co-ordination and responsibility for existing projects/tasks, e.g. mentoring.
- 2 (ii) For the SSI to advise the Trustee Committee of current progress and preparing for integration and co-ordination of future initiative, e.g. IIP and IT Competence Certificate.

## PARTNERS

- The LEA
- All schools and colleges in Swindon, including Wootton Bassett and Bradon Forest
- The business community
- Lifetime Careers and TEC
- Community representatives

Swindon Education Business Partnership

## Appendix 8.7: Swindon key skills projects

### ***Allied Dunbar(Presentation Skills)***

**Background** Following a number of requests from schools, Allied Dunbar, who have their head office in Swindon employing some 2000 people, were approached to discuss how a presentation skills programme might be developed. The company has its own programme for direct employees and associates, and this was used as the basis for a programme to be developed for students in Key Stage 4. Initially discussions took place between Elaine Canniffe, Training Consultant with Allied Dunbar, and Richard Cummins, Wiltshire LEA Advisory Service. Allied Dunbar has its main offices in the centre of Swindon but also has a modern training centre nearby and it was decided to use this as the base for the initial pilot.

Swindon itself is a growing town with an expanding population and is the base for a number of large national and multinational companies. In April 1997 it will become a new Unitary Authority with its own Education Department. There has been a long tradition of education/business liaison and most schools have an effective network of business partners who support a wide range of curriculum-based programmes.

**Programme Development** Examination of the Allied Dunbar course confirmed that in essence it would meet the needs of the schools and their students, but would require some amendment. The existing course objectives focused on an understanding of structure, planning, delivery and use of visual aids, participants receive input and the opportunity to practise.

In addition we added some further objectives as follows:

- to enhance general communication skills
- to develop problem-solving skills
- to improve the ability to work with others
- to increase self confidence
- to raise awareness of a business environment
- to highlight skills transferability
- to learn how to give and receive feedback

Initially a few schools were invited to participate in a pilot programme with a maximum of 30 students per school. The teachers met at the training centre and were briefed by



Elaine Canniffe who would be delivering the course, and dates were negotiated by each school.

Finally the courses took place during the summer term with evaluations by students, teachers and observers. The programme was overwhelmingly well received and only minor adjustments have been made to subsequent programmes. To date some 10 schools and over 800 pupils have taken part.

#### SWINDON KEY SKILLS PROJECT4

Summary The programme is very successful and annually involves 9 or 10 schools and up to 300 students. Apart from the benefits of the course itself students appreciated the opportunity to work in a business environment with business trainers. In some schools the course has been built into the Year 10 curriculum but is still something of a bolt-on in others. Where students are fully prepared and teachers carry out follow-up work back at school the benefits are greater and longer lasting. Some schools have identified specific training needs amongst staff in developing presentation skills but this still appears to be an issue in others. The Swindon Key Skills Consortium is currently looking at staff training needs as a result of its overall pilot programme.

Finally there is an issue about entitlement as only 30 students from each school have the opportunity to take part. The consortium is addressing this and as well as training teachers additional companies are being invited to take part so that all Year 10 students will benefit. It is hoped that some of these companies will be linked with their local school as there have been some logistical difficulties in transporting students to the training centre.

The programme is seen as one of several key skills which will be increasingly important to young people and Allied Dunbars commitment to the programme demonstrates their own recognition of the importance of communication skills generally amongst its own employees.

#### SWINDON KEY SKILLS PROJECT5

##### **Effective Presentations**

Aim To give students practical ideas on how to prepare and deliver presentations and design and use visual aids.

**Objectives**

See other sheet

**Programme Introduction** What will be covered, expectations, process.

**Video** The floor is yours now.

Covers principles of preparation and structure; the audience; location and timing; objectives and introduction; body language; cue cards; voice techniques.

Interspersed with discussion and explanation.

**Visual Aids** Examples of good and bad visual aids; use of flip charts and overhead projectors.

**Audience** Voice intonation exercises; how to handle mistakes; using pace and tone; eye contact; dealing with questions; handouts.

**Presentation Exercise** In groups students prepare and deliver short presentations and receive feedback from the audience.

Discussion initiated on principles of feedback.

**Evaluation** Evaluation of the session and development of individual action plan.

**Pre-Course Preparation** Teachers who will be accompanying the students are invited to Allied Dunbar for a briefing where the following points are covered:

- most appropriate age group of students
- objectives and follow-up
- participation of students
- the environment
- use of school video tape for later reinforcement
- Allied Dunbar house rules

Burma Castrol, Wootton Bassett and St Edmunds Schools

**Presentation Skills****Within a GNVQ Context**

## **Background**

Wiltshire LEA has developed a support network of GNVQ Development Groups across the county along with training and support programme. Over a period of time schools and colleges identified a need for support in delivering and assessing key skills. In response to this an approach was made to the Training Department of Burma Castrol, initially to canvas opinion and to share ideas. Burma Castrol responded positively to this and it was agreed that Julie Norman, a training consultant with Burma Castrol, and Julie Cathcart and Richard Cummins from Wiltshire LEA would work together on a communication skills programme, focusing on presentation skills. The company does have a presentation skills course for its own employees but it was felt that it would be inappropriate to amend this and that a new course should be designed specifically for GNVQ students.

It was agreed to invite Year 12 Art & Design students from Wootton Bassett School and Year 9 students from St Edmunds School, who would be starting a Part 1 course in September. It was recognised that this would be quite a challenge, given the differences in age and experience.

Although the course would have an emphasis on presentation skills there would be an opportunity to work with others and it was agreed to build this into the course design.

## **Programme Development**

The course was being aimed at Art & Design GNVQ students so an element was identified which could be addressed as part of the course. The students would also require input about presentations and the opportunity to practise. The focus in the morning would be presentation skills and the afternoon Art & Design, culminating in a full-scale formal presentation.

## **Course Objectives**

- to establish an understanding of the key elements of a presentation
- to develop knowledge and understanding of how to plan a presentation
- to increase the students skill levels in making presentations to both large and small groups
- to provide an opportunity for the students to have their achievements recognised, in relation to the appropriate national key skills criteria (as required for GNVQ)

## **SWINDON KEY SKILLS PROJECT7**

### **Programme**

Welcome and introductions 10 minutes

Icebreaker/introductory activity 10 minutes

Preparation for a group presentation 20 minutes

Presentation 1 hour

Break 15 minutes

Input - what makes a good presentation (see Appendix 1) 20 minutes

Personal presentation - issues related to personal presentation for an interview 50 minutes

Lunch 1 hour

Using visual aids (see Appendix 2) 15 minutes

Presentation 250 minutes

Briefing for presentation 3

Preparation for presentation 31 hour

Presentations 30 minutes

Feedback and plenary 20 minutes

This programme is designed for a group of 24 - 30 students working throughout the day in teams of 4 or 5. Inputs were made by the Burma Castrol trainer and each team of students had a process observer attached to them who debriefed each activity.

All the presentations were videoed.

## SWINDON KEY SKILLS PROJECT 8

### Presentation 2 Brief

**Your Personal Presentation - How Do You Present Yourself?** What are the things you should consider when you on display - presenting or selling yourself? These occasions might include:

- how you look - your total appearance
- how you behave - from the moment you arrive

Prepare a 5 minute presentation to give the group.

## SWINDON KEY SKILLS PROJECT9

### Presentation 3 Brief

**Scenario** Burma Castrol organise a series of one week courses annually for its chief executives and their management teams called the Group Management Courses (GMC) Programme.

These are top level, strategic courses which cover the following areas:

- Castrol marketing
- Finance
- Managing people
- Chemicals marketing

The aim is to give delegates the specific knowledge and skills which can be related to the Burma Castrol corporate management policy.

The Group hold up to 15 courses every year and delegates are recruited from all parts of the world.

**Requirements** You are a member of a design team and have been asked to use your knowledge and expertise in art and design to devise an image which could be used as a logo or crest for the GMC programme.

The image is expected to appear on all the following items:

- the front cover of course folders
- headed notepaper
- delegates name badges
- pens

The items will all form part of each delegates pack at the conference where the courses are held.

The image should also reflect the nature of the company, its corporate identity and its standing in the world market.

## SWINDON KEY SKILLS PROJECT10

### Research Brief (1hourtimelimit)

Your team will need to:

- brainstorm ideas
- identify research materials to use for inspiration and information
- develop ideas which lead to good presentation roughs for each of the production requirements  
(folder, badge, notepaper and pen)
- prepare for group presentation to client (presentation time 10 minutes)

Feedback from the day suggested that more time should be devoted to preparation for each presentation but recognised that this might be difficult in the time available. There were also suggestions that the first and second briefs could be swapped and that the visual aid input could come earlier.

Nevertheless the evaluations were very positive and teachers have reported subsequently on the increased confidence and ability of the students in making presentations.

The impact of working in a company environment with input from a business trainer was significant. The students made great efforts with their dress and had the opportunity to mix with company personnel at lunchtime. The working facilities and resources were impressive and the students talked positively about the experience for weeks afterwards. They were challenged throughout the day both in the tasks set for them and in adjusting to work with students from another schools.

The teachers gained from the opportunity to experience a focused and structured training day led by a business trainer. They were able to see how a course element could be delivered within a business setting at the same time as addressing two key skills. With the support provided they were able to gather evidence and assess the students. Finally the day led to a considerable amount of follow-up work at school and has continued to provide a useful reference point.

*W.H. Smith, Kingsdown School and Dorcan School*

Working With Others

Initial discussions with the project leader in the company, Jane Stones from the Community Affairs Department; Viv Long, a company training consultant; and Richard Cummins, Swindon LEA, identified the following aim and objectives.

Aim To develop the skills of working with others in a group of 24 Year 9 students from Dorcan and Kingsdown Schools.

### **Objectives**

- To develop and practise communication skills.
- To develop negotiation skills.
- To develop listening skills.
- To identify and harness individuals qualities and skills.
- To develop an understanding of problem-solving skills.

Considerable time was spent developing a programme to achieve these objectives and details appear elsewhere. However a number of key points were identified:

- The students should be of mixed ability and roughly equal numbers of male and female.
- The students would work in 4 groups of 6 throughout the day.
- Students would be thoroughly briefed before the day.
- Teachers and W.H. Smiths employees would act as process observers, one per group.
- The programme would take place on company premises and would last a full day.
- Evaluation of the day would contribute towards the overall Swindon key skills programme.

### **SWINDON KEY SKILLS PROJECT12**

Once the programme had been developed the teachers and W.H. Smiths employees were briefed and the students prepared for the day.

The day was a mixture of input and activity with two groups operating in separate rooms and coming together periodically. The majority of the inputs were by Viv Long with support from Jane Stones and Richard Cummins, but the majority of the day was spent with the students working in their groups with the observers facilitating the feedback sessions.

Evaluation of the day resulted in very positive responses from all involved. The students made some comments of considerable perception and insight and apart from minor observations about organisational details the comment from the observers were very positive. The teachers noted that opportunities for follow-up in school would be limited but it did emphasise the need to address the development of key skills throughout the curriculum.

### **What Makes a Good Presentation? - Points to Consider**

- Presentations have beginnings, middles and endings

- Who is your audience? - Tailor your language

- What are your objectives?

- Preparation: Brainstorm

Order your material

Prune it

Structure it:

Opening

Key areas 1, 2, 3

Conclusions and summary

What questions might you be asked?

Visual aids

Prompt cards

REHEARSE!

- On the day: Check your material

Check the room layout

Check the equipment

BREATHE DEEPLY, SLOW DOWN!

- Afterwards: How did you do?

What might you change next time?



## Appendix 2

### Use and Abuse of Visual Aids

- Visual aids should help you illustrate points, not take over and be the main focus
- Types of visual aid - when choosing, bear in mind the advantages and drawbacks of each
- Remember the 3Bs:Big  
Bold  
Brilliant
- Stick to the ABC of communication:Accurate  
Brief  
Clear
- You are a visual aid!

## SWINDON KEY SKILLS PROJECT 15

### Key Skills

#### **Present**

Viv Miles (VM)Allied Dunbar  
Barbara Duthie (BD)Allied Dunbar  
Gary Webb (GW)Allied Dunbar  
Jane Stones (JS)W H Smith  
JulianNeal (JN) WH Smith

Norma Adair (NA)Rover  
Julie Cathcart (JC)WiltshireLEA  
Richard Cummins (RC) Wiltshire LEA  
Karen Lang (KL) Kingsdown School  
Bryan Jackson (BJ) Dorcan School  
Julia Shepard (JS) Bradon Forest School  
Steven Pike (SP)Lifetime Careers  
Joan Lardy (JL) Wiltshire TEC

**Resourcing**

RC reported that he had looked at opportunities for funding from the TEC and NCVQ.

Funding has been made available from GOSW to support key skills across the county. It was disappointing that when the tender came out from the TEC it did not tie in with any of the current activity. It was decided that there would be little point in tendering and the tender was duly awarded to a consortium of various FE Colleges. It is hoped that there may be some funding available from April '97 through the EBP.

The NCVQ are interested in what the present consortium is doing. RC has been asked to respond to a paper produced by a joint committee looking at Dearing, specifically in the area of key skills. The NCVQ are asking for case studies about the activities in companies and their involvement in key skills projects. RC has been asked to talk about the activity in Swindon at conferences in other parts of the country.

**Action**

VM asked about the criteria for funding through NCVQ. JC said budgets are closely set, however, historically in October NCVQ identify any unused money and then look for worthy projects to support - key skills is very high on the list. SP commented that he had recently attended an NCVQ seminar on maximising potential and key skills were a big issue.

JC explained how GEST funding worked. The funding allocation for 97/98 has identified key skills as something that needs to be addressed. The majority of schools in Wiltshire will benefit from the funding, mainly for the training of teachers.

SP commented that members of the present group have the opportunity to influence the expenditure of EBP funding - JC, RC, NA and SP are all members of various groups.

RC said that from April Swindon LEA are funding a new Business Liaison Unit which in effect will be a new EBP. There is every intention to work closely with Wiltshire in the future.

JC told the group that IT units are now available for KS4. BTEC are sponsoring a 1/2 day conference on 17 October at Kington Manor, near Chippenham - specialists who wrote the standards will be there to explain them.

## **School Internal Mapping Exercise**

### Dorcan School

BJ has made an attempt to trawl each department for their ideas on where they see different aspects of key skills as most important.

Presentation skills were felt to be important for all year groups in English, Drama and Languages. History and Geography departments were interested in team and group working, and the Language and Drama departments also mentioned this as being of particular interest at Key Stage 4 (KS4). The Geography department mentioned problem solving at KS4, while the Science and Technology departments felt this was important right through the curriculum. Also accuracy/quality control skills were mentioned by the Language department.

### IAction

bl~ to produce evidence from Kingsdown School but she agreed that the school would have similar comments.

I ~

### Bradon Forest School

~F JS had prepared a handout of some of the activities across the whole school which was distributed to the group - copy attached. She explained some of the activities, and reiterated her comment from the previous meeting about the problem of providing a quality experience for all students.

VM identified the problem of transferability of skills and felt that the way forward now was to identify common ground between school and company needs.

## **Overlap and Resources - companies**

### W H Smith

JN said he did not yet have enough knowledge to comment. He explained the situation at W H Smith - there are many new people in new roles and many issues both long and short term to be considered. He has a lot of development work to do with staff in the short term. Competencies have been scrapped and new ones now have to be created. He can see however, that there may be an overlap in the areas of presentation skills, assertiveness and negotiation, and teamworking/team building. At present the company is more concerned with

the immediate practical training needs internally, rather than longer term developmental needs. There is therefore not much overlap at present and not much available resource either.

#### Allied Dunbar

GW said he had been working on exploring how the 'diluted process' could be addressed when he heard that BD had met RC to discuss how Allied Dunbar could work with teachers.

BD explained that there was a great deal of overlap in their training needs and Allied Dunbar is focusing on core skills, currently communication, presentation, influencing others and team working. She has training materials at Level 3 which need only a small amount of adapting before they would be suitable for education.

#### Action

She made the comment that generally training with administrators and the sales force provokes change in the short term whereas training with managers has more long term effect. Would it therefore be most beneficial to target training at key teachers, working in partnership to develop a progressive programme of key skills?

VM said that Allied Dunbar has similar resourcing issues to W H Smith. He recommended that if only a small number of days are available the time should be spent on those people who will make the biggest impact. Allied Dunbar is currently going through restructuring and the process is forcing hesitancy about committing resources. There is the potential to offer two days and willingness to offer more if it becomes possible later.

Rover Rover has already identified where world class skills will lie - many are technical skills but also included those identified as GNVQ core skills.

Rover are starting the training with the Modern Apprentices working to Level 3 except for IT which will be to Level 2. RC and NA are working with 3rd Year apprentices in order to check on the validity of schools' and Rover's core skills standards.

There is much commonality but resourcing is an issue.

Rover have considered running training for Y 9 - 13 students starting with KS3 Presentations Skills; KS4 Communication Skills, Working with Others, and Presentation Skills; KS5 developing further KS4 skills.

NA commented that the group now seems to be looking at developing teachers and was in favour of this. SP said that employers would have the opportunity to reinforce their message to students through teachers, and that all would benefit.

JS said that the long term impact on students, of visit to companies, must not be underestimated. Suggested that other adults, e.g. governors could also be involved and used as an extra resource.

ere were ways th~t companies could benefit in real way - e.g. **Action** employees could assess stu.dents and collect evidence for their assessor awards. The TEC would be interested in the opportunity to raise knowledge of National Records of Achievement at KS3 and 4. If all students entering companies already had core skills it would be of great benefit to companies as they would then be able to concentrate on technical and job specific skills.

GW confirmed that the present commitment of Allied Dunbar to provide Presentation Skills training would continue, as would support of 'ad-hoc' events. He is still concerned with trying to find ways to expand this throughout the company and is considering presenting the involvement with schools as an opportunity to develop staff rather than as merely a request to support school activity. Swggested it might be helpful to put together a paper on "win-win" opportunities for education and companies.

In summing up RC said he felt that the general feeling of the meeting was to focus on teachers at present and this was agreed. VM confirmed the offer of two days time from Allied Dunbar. W H Smith are unlikely to be able to offer any resource before Christmas but would hope to be able to commit to the New Year. JN needs more information on core skills and the potential RC numbers involved - RC will contact him to arrange a briefing meeting. NA offered planning time before Christmas.

RC offered to provide link with Allied Dunbar. RC will co-ordinate a RC Planning Group to discuss the way forward and decide on the focus group of teachers (some options are one school/one faculty; two teachers from each school; one school/teachers from different subject areas). RC will liaise with schools about how they would like to be involved and what offers they are able to make to support the project.

JC asked who would produce the case studies. As he was involved in all the RC pilot days RC volunteered to do this in consultation with schools and company representatives involved.

Date of next meeting: Wednesday 20 November  
4.00 p.m.  
Kingsdown School, Hyde Road,  
Stratton St Margaret, Swindon

## Key Skills

Notes of the meeting held at Kingsdown School on Wednesday 20 November 1996.

### **Present**

Viv Miles (VM) Allied Dunbar  
 Barbara Duffy (BD) Allied Dunbar  
 Gary Webb (GW) Allied Dunbar  
 Norma Adair (NA) Rover  
 Julie Cathcart (JC) Wiltshire LEA  
 Richard Cummins (RC) Wiltshire LEA  
 Karen Lang (KL) Kingsdown School  
 Bryan Jackson (BJ) Dorcan School  
 Julia Shepard (JS) Bradon Forest School  
 Dane Gould (DG) NCVQ  
 Cliff Garland (CG) Thamesdown Borough Council

### **1. Introductions Action**

### **2. Update**

#### Rover/Bradon Forest School

NA explained that the collaboration seemed to be breaking into two projects.

a) Includes whole of year 1 as part of the Bradon Forest industry week and is not specifically key skill related. It will probably link in with the Modern Apprentices. Plans for 4 x one day modules during the industry week concentrating on presentation skills and the manufacturing environment. May be linked in with Modern Apprentices and communication skills.

b) The second project is with Y10 students, again using technician Modern Apprentices. It is hoped that the apprentices could use the opportunity to gather evidence for their key skills.

JS offered herself as a 'mentor' for these projects - suggested that apart from the school focus, the school could conduct some sort of assessment for the Modern Apprentices and thus complete the circle. The need to ensure the

1

quality of the **contribution the apprentices make was stressed. It is Acffon** anticipated that the same group of apprentices and students would work

together over a period of time bringing continuity to the programme.

It was proposed that Steve Pike, Lifetime Careers, should be invited to the next meeting to help ensure the incorporation of this project into PDPsRC (Personal Development Plans) and ADRs (Associates Development Reviews).

Rover and Bradon Forest School hope to start the projects in the Spring term.

#### Allied Dunbar/St Joseph's RC School

The meeting between Allied Dunbar and St Joseph's School has not yet been held (date arranged for 4 December) although some preparatory work has already taken place. Allied Dunbar will be working with a group of teachers from St Joseph's on developing teaching methods to deliver oral competence. Allied Dunbar already have some materials which could be adapted and VM and BD have looked at St Joseph's action plan to see what will be involved. The planning meeting on 4 December will identify key issues within the school.

#### WH Smith

RC met with JS recently. WH Smith has just come through a major restructuring, but JS is keen to continue her commitment to the consortium, working with Kingsdown and Dorcan Schools. She has identified another trainer who is keen to be involved but they were both unable to be at this meeting. They will set a date for a meeting with Kingsdown and Dorcan JS soon.

#### Burma Castrol

David Edelsten who has been the very helpful contact in Burma Castrol to date has now left the company. His position has not been filled at present. RC may approach Burma Castrol again, and also Nationwide. He would value suggestions from other members of the consortium as to which other companies could be approached. All

RC went on to say that there has been a clear commitment from the LEA to support this initiative. The secondary heads have been consulted and are

#### Action

would sit in broader context and the need to be flexible. He stressed that any programme needs to work for all involved and for all to benefit.

RC and JC reported they had written to Tim Oates, NCVQ with their views and confirmation that the consortium would wish to be part of the national pilot, and that it would be very powerful if it also came from the companiesAll involved. It was felt strongly that a certificate of competence is worthless unless it is an accurate reflection.

JS said that assessment has to be got right. Schools are now much better at saying something will not work, or is not working, than they used to be.

JS also mentioned resourcing and financing for the future of the consortium as she is beginning to feel concerned about this. She is in a position to divert some funding but is concerned about meeting all the possible costs. Initial costs are always greater because of the extra planning time, and the need and desire to 'get it right~'. Requested feedback from RC re. possible funding atRC next meeting.

GW said that when an activity is seen to work well internally it can provide the impetus for more external activity.

RC said that when the EBP was up and running the opportunity would be there to go to them for support in approaching the TEC. There is a need to RC construct a proposal to put to the group after Christmas.

JC offered £500 which she has available - it would be helpful if it could be linked to a GNVQ or potential GNVQ provider and there is a need to allocate it by the end of the financial year. She also reported that Stephen Pike had a small amount of money available which could be diverted to Bradon Forest and Rover.

DG said that NCVQ had no money to support developments.

VM asked for views re GNVQ and NVQ developments if there is a change of government DG remains positive and believes there would be no change of name.

NCVQ have been given the responsibility for marketing NVQs, etc. until 1998 when QNCA becomes combined with SCAA.

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### **Action**

### **Action**



BD requested information about take up of GNVQs in Wiltshire and JC gave a short brief.

DG produced a booklet on Progression 14 - 16 which could be made available to anyone interested.

DG mentioned two documents he is working on:

1 ) Case studies of people who have entered employment from GNVQ - at present he has case studies of 70 young people. He would like to market test a few of these and asked if he could bring some to the forum.

He would welcome any examples of employees or students in this area whoAll could be Included.

2) Handbook re. vocational relevance using strategies, again including case studies. The present consortium will be included in this publication.

DG mentioned new materials which will be published in the New Year aimed at employers explaining GNVQs including how they relate to other qualifications.

Date of next meeting: 5 February 1997  
4.00 p.m.  
Bradon Forest School, The Peak,  
Purton, Swindon

### **Problem Solving and Decision Making**

This programme has been developed by Norma Adair, Rover Partnership Centre Manager, and Richard Cummins, WEST, with advice from Rover's Training Department.

• **Designed for**  
Secondary Schools and Colleges

**Duration**  
One day or two half days

**Number**

Maximum number will depend on venue and availability of staff.

Age

Years 10 and above. A similar package is available for younger students.

### **Process**

The programme is active with a mixture of practical exercises and inputs. It is designed to give students problem-solving and decision-making techniques and strategies which can be used across a range of contexts. The programme will use business based activities.

### **Would you like more information?**

Phone Richard Cummins or Judy Hawkes on 01793 616054 to discuss ~our needs.

This package is flexible and can be adapted to suit a variety of students and situations. It can be delivered in or out of school or college and can stand alone or as part of a GNVQ course, PSE or industry awareness programme or within a subject curriculum. The programme will also provide teachers with the opportunity to develop their own process-observation and debriefing skills.

**Age Range:** 14 - 16

16+

Teachers

**Marketed to:** individual schools/joint sessions

## **PROGRAMME**

### **Activity 1: Data Collection**

Communicating

Sorting; ~

Prioritising

Eliminating

Reflection

Activity 2: As above but more complex

Reflection

Input on: Brainstorming and purposes/rules etc-

**Activity 3:** Brainstorming through practical activity

Identification of skills

Planning

Time-keeping

10.30Break

Split for age ranges

**Activity 4:** (1050) As 3 + more complex data eg collection

Activity to problem solve about problem solving?

Could we introduce fish-bone etc

LUNCH

**Activity 5:** Complex problem /decision

Data collection

Communicating

Sorting

Prioritising

Eliminating

Brainstorming

Identifying individual skills

Negotiating

Planning

Time-keeping

Mind-mapping

Fishbone

Force field analysis

SWOT

Critical path

## PROBLEM SOLVING AND DECISION MAKING/TEAM-BUILDING

### **Purpose**

To develop decision-making and problem solving skills through a process which develops/addresses team-work skills.

### **Objectives**

Students have an understanding of processes required to effective problem-solving.

Students have an understanding of decision-making processes.

Students will experience working with unfamiliar adults and peers.

### **Outcomes**

Students will have the skills/tools to solve problems and make decisions in a range of situations.

Students will recognise the transferability of skills.

Students will be more effective in working with others.

## Key Skills

Notes of the meeting held at Burma Castrol on Thursday 23 May 1996.

### **Present**

Julie Boulton Allied Dunbar  
 Paul Harrison Allied Dunbar  
 Gary Webb Allied Dunbar  
 Jane Stones W H Smith  
 Norma Adair Rover  
 Julie Cathcart Wiltshire LEA  
 Richard Cummins Wiltshire LEA  
 Julie Norman Burma Castrol  
 David Edelsten Burma Castrol  
 John Croft Wiltshire LEA  
 Judy Hawkes Wiltshire LEA

The people attending the meeting have been involved in the development of a series of pilot programmes addressing key skills in young people, specifically communication and presentation; working effectively together, and problem-solving and decision-making.

The purpose of the meeting was to share information about these programmes; to consider the issues arising; to discuss a proposed model for delivery to students; to discuss the possibility of working as a consortium; to look at the funding implications and to consider the implications for companies.

### **The Programmes**

All the programmes have been jointly developed by LEA and company personnel.

1. The Allied Dunbar programme is a half day on presentation skills for thirty Year 9 or 10 students. Nine schools are involved and the course is delivered by Allied Dunbar staff with support from teachers. It is intended to be part of a module and as a stimulus for further work in school.
2. The Burma Castrol programme also addresses presentation skills. The pilot involved

twelve Year 9 students and twelve Year 12. The context was Art and Design as the older students are doing a GNVQ course and the younger ones will be involved in a

National GNVQ Part 1 pilot in September. The course lasted for one day and was held at Burma Castrol.

3. The Rover programme addressed problem-solving and decision making skills and involved 24 students involved in a GNVQ Part 1 pilot. The course was held at Rover and lasted for one day.

4. Working effectively with others is the theme for the W H Smith's programme to be held at W H Smith's on 6 June. Twenty four Year 9 students will be involved.

All the programmes involve teachers and company personnel and the process is similar with students working together in small groups with an adult acting as an observer and to provide feedback.

## The Issues

The following issues were identified:

- **Time and Resources** - it was recognised that time and resources were limited and that these would need to be used as effectively as possible.
- **Sequencing** - it was felt that students need to be introduced to the skills in a specific order to gain maximum benefit.
- **Entitlement** - should students be entitled to the experience of working on company premises? Should all students in the age group be entitled to access to the programmes?
- **Number of schools** - the companies will be unable to offer the service to all schools in Swindon. Once a model is identified should other companies be invited to participate?
- **Transferability** - It was recognised that adults and young people have difficulty in recognising the transferability of skills from one context to another.
- **Teachers and business employee training** - people leading and participating in courses need to be fully trained. This was also seen as an opportunity to learn from one another, as teachers and business people bring different skills.

- **Preparation and follow-up** - the experience must be part of a module requiring preparation for the students both before and after the experience.

- **Mixed-ability** - attention needs to be paid to the needs of all students.

**Evaluation** - continuous evaluation will be required to ensure the programmes are of the highest quality.

**Management** - the programmes will need careful management. There are significant management issues for schools and companies once key skills become integrated into the curriculum.

- **Dress Code** - this was a relatively small issue, but schools need to be aware of the dress code in some companies.

Norma Adair described a model which she is considering introducing in the Autumn Term at the Rover Partnership Centre. She feels that the skills should be addressed sequentially to allow the students to build on each one in a logical way. Her proposed programme will begin with communication skills and presentation skills followed by working effectively with others, and finally problem-solving and decision-making. Prior to the programme starting the teachers will take part in a training day to enable them to prepare their students and to participate in the delivery.

Discussions took place about the next step for the group. There was commitment from all participants to take the project further and a proposal by Jane Stones that the group should work a consortium was agreed.

There are still a number of issues to be resolved before the group can get down to the detail of planning individual programmes, and all present felt they needed to brief colleagues in their company and gain support of senior management. It was agreed to invite representatives from the four schools involved in the pilot programmes to the next meeting.

This meeting will take place on Friday 19 July at Allied Dunbar, King Edward's Place, Wanborough, from 9.00 am to 11.00 am.

## ISSUES

- 1) Key skills - What are they? Process as important as individual skills, i.e. managing own learning.
  - Implications for schools and companies.

Schools - How will they be delivered

- Entitlement
- Levels
- Staff Training
- Resources
- NRA - Key skills being cross-referenced

Companies - Induction Programmes

- Progression
- Liaison with schools
- Shared expertise

2) Vocational relevance within the National Curriculum

3) Funding/resources

4) Staff development and training

5) Inter-connectedness of proposals and developments - White Paper in December about 14 - 19 issues.

6) Role of TECs

7) Pace- Changes likely to occur at different times

8) Local partnerships

- links with business, Careers Service, etc.
- crucial to success

9) Framework of qualifications

- clarity and coherence
- reduction in number of qualifications
- types of qualifications

10) GNVQs and Key Skills

- UCAS will give preferential points to key skills
- profile for key skills achievement of UCAS form

1 1 ) Management

- within institutions
- local

1 2) Entitlement

1 3) Evaluation



14) Progression routes into employment - will lead to more collaborative relationships with ITOs and companies.

## EXAMPLES OF CURRENT STRATEGIES

- school based EBPs
  - Swindon Key Skills consortium
  - work experience enhancement
  - mentoring
  - joint schools induction/key skills/business context activities
  - formal partnerships, e.g. Warneford/Allied Dunbar/New College I.T.
- Accreditation - Wootton Bassett, GNVQ Part 1.

## Key Skills

Notes of the meeting held at Burma Castrol on Thursday 23 May 1996.

### **Present**

Julie Boulton Allied Dunbar  
 Paul Harrison Allied Dunbar  
 Gary Webb Allied Dunbar  
 Jane Stones W H Smith  
 Norma Adair Rover  
 Julie Cathcart Wiltshire LEA  
 Richard Cummins Wiltshire LEA  
 Julie Norman Burma Castrol  
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 Judy Hawkes Wiltshire LEA

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The purpose of the meeting was to share information about these programmes; to consider the issues arising; to discuss a proposed model for delivery to students; to discuss the possibility of working as a consortium; to look at the funding implications and to consider the implications for companies.

## The Programmes

All the programmes have been jointly developed by LEA and company personnel.

1. The Allied Dunbar programme is a half day on presentation skills for thirty Year 9 or 10 students. Nine schools are involved and the course is delivered by Allied Dunbar staff with support from teachers. It is intended to be part of a module and as a stimulus for further work in school.

2. The Burma Castrol programme also addresses presentation skills. The pilot involved twelve Year 9 students and twelve Year 12. The context was Art and Design as the older students are doing a GNVQ course and the younger ones will be involved in a

National GNVQ Part 1 pilot in September. The course lasted for one day and was held at Burma Castrol.

3. The Rover programme addressed problem-solving and decision making skills and involved 24 students involved in a GNVQ Part 1 pilot. The course was held at Rover and lasted for one day.

4. Working effectively with others is the theme for the W H Smith's programme to be held at W H Smith's on 6 June. Twenty four Year 9 students will be involved.

All the programmes involve teachers and company personnel and the process is similar with students working together in small groups with an adult acting as an observer and to provide feedback.

## The Issues

The following issues were identified:

- **Time and Resources** - it was recognised that time and resources were limited and that these would need to be used as effectively as possible.

- **Sequencing** - it was felt that students need to be introduced to the skills in a specific order to gain maximum benefit.

- **Entitlement** - should students be entitled to the experience of working on company premises? Should all students in the age group be entitled to access to the programmes?
- **Number of schools** - the companies will be unable to offer the service to all schools in Swindon. Once a model is identified should other companies be invited to participate?
- **Transferability** - It was recognised that adults and young people have difficulty in recognising the transferability of skills from one context to another.
- **Teachers and business employee training** - people leading and participating in courses need to be fully trained. This was also seen as an opportunity to learn from one another, as teachers and business people bring different skills.
- **Preparation and follow-up** - the experience must be part of a module requiring preparation for the students both before and after the experience.
- **Mixed-ability** - attention needs to be paid to the needs of all students.

**Evaluation** - continuous evaluation will be required to ensure the programmes are of the highest quality.

**Management** - the programmes will need careful management. There are significant management issues for schools and companies once key skills become integrated into the curriculum.

- **Dress Code** - this was a relatively small issue, but schools need to be aware of the dress code in some companies.

Norma Adair described a model which she is considering introducing in the Autumn Term at the Rover Partnership Centre. She feels that the skills should be addressed sequentially to allow the students to build on each one in a logical way. Her proposed programme will begin with communication skills and presentation skills followed by working effectively with others, and finally problem-solving and decision-making. Prior to the programme starting the teachers will take part in a training day to enable them to prepare their students and to participate in the delivery.

Discussions took place about the next step for the group. There was commitment from all participants to take the project further and a proposal by Jane Stones that the group should work a consortium was agreed.

There are still a number of issues to be resolved before the group can get down to the detail of planning individual programmes, and all present felt they needed to brief

colleagues in their company and gain support of senior management. It was agreed to invite representatives from the four schools involved in the pilot programmes to the next meeting.

This meeting will take place on Friday 19 July at Allied Dunbar, King Edward's Place, Wanborough, from 9.00 am to 11.00 am.

### Key Skills

Notes of the meeting held at Kingsdown School on Wednesday 20 November 1996.

#### **Present**

Viv Miles (VM) Allied Dunbar  
 Barbara Duffy (BD) Allied Dunbar  
 Gary Webb (GW) Allied Dunbar  
 Norma Adair (NA) Rover  
 Julie Cathcart (JC) Wiltshire LEA  
 Richard Cummins (RC) Wiltshire LEA  
 Karen Lang (KL) Kingsdown School  
 Bryan Jackson (BJ) Dorcan School  
 Julia Shepard (JS) Bradon Forest School  
 Dane Gould (DG) NCVQ  
 Cliff Garland (CG) Thamesdown Borough Council

#### **1. Introductions Action**

#### **2. Update**

##### Rover/Bradon Forest School

NA explained that the collaboration seemed to be breaking into two projects.

a) Includes whole of year 1 as part of the Bradon Forest industry week and is not specifically key skill related. It will probably link in with the Modern Apprentices. Plans for 4 x one day modules during the industry week concentrating on presentation skills and the manufacturing environment. May be linked in with Modern Apprentices and communication skills.

b) The second project is with Y10 students, again using technician Modern Apprentices. It is hoped that the apprentices could use the opportunity to gather evidence for their key skills.

JS offered herself as a 'nmentor' for these projects - suggested that apart from the school focus, the school could conduct some sort of assessment for the Modern Apprentices and. thus complete the circle. The need to ensure the

1

quality of the **contribution the apprentices make was stressed. It is Acffon** anticipated that the same group of apprentices and students would work together over a period of time bringing continuity to the programme.

It was proposed that Steve Pike, Lifetime Careers, should be invited to the next meeting to help ensure the incorporation of this project into PDPsRC (Personal Development Plans) and ADRs (Associates Development Reviews).

Rover and Bradon Forest School hope to start the projects in the Spring term.

#### Allied Dunbar/St Joseph's RC School

The meeting between Allied Dunbar and St Joseph's School has not yet been held (date arranged for 4 December) although some preparatory work has already taken place. Allied Dunbar will be working with a group of teachers from St Joseph's on developing teaching methods to deliver oral competence. Allied Dunbar already have some materials which could be adapted and VM and BD have looked at St Joseph's action plan to see what will be involved. The planning meeting on 4 December will identify key issues within the school.

#### WH Smith

RC met with JS recently. WH Smith has just come through a major restructuring, but JS is keen to continue her commitment to the consortium, working with Kingsdown and Dorcan Schools. She has identified another trainer who is keen to be involved but they were both unable to be at this meeting. They will set a date for a meeting with Kingsdown and Dorcan JS soon.

#### Burma Castrol

David Edelsten who has been the very helpful contact in Burma Castrol to date has now left the company. His position has not been filled at present. RC may approach Burma Castrol again, and also Nationwide. He would value suggestions from other members of the consortium as to which other

companies could be approached. All

RC went on to say that there has been a clear commitment from the LEA to support this initiative. The secondary heads have been consulted and are

2

### **Action**

would sit in broader context and the need to be flexible. He stressed that any programme needs to work for all involved and for all to benefit.

RC and JC reported they had written to Tim Oates, NCVQ with their views and confirmation that the consortium would wish to be part of the national pilot, and that it would be very powerful if it also came from the companiesAll involved. It was felt strongly that a certificate of competence is worthless unless it is an accurate reflection.

JS said that assessment has to be got right. Schools are now much better at saying something will not work, or is not working, than they used to be.

JS also mentioned resourcing and financing for the future of the consortium as she is beginning to feel concerned about this. She is in a position to divert some funding but is concerned about meeting all the possible costs. Initial costs are always greater because of the extra planning time, and the need and desire to 'get it right~'. Requested feedback from RC re. possible funding atRC next meeting.

GW said that when an activity is seen to work well internally it can provide the impetus for more external activity.

RC said that when the EBP was up and running the opportunity would be there to go to them for support in approaching the TEC. There is a need to RC construct a proposal to put to the group after Christmas.

JC offered £500 which she has available - it would be helpful if it could be linked to a GNVQ or potential GNVQ provider and there is a need to allocate it by the end of the financial year. She also reported that Stephen Pike had a small amount of money available which could be diverted to Bradon Forest and Rover.

DG said that NCVQ had no money to support developments.

VM asked for views re GNVQ and NVQ developments if there is a change of government DG remains positive and believes there would be no change of name.

NCVQ have been given the responsibility for marketing NVQs, etc. until 1998

when QNCA becomes combined with SCAA.

### **Action**

BD requested information about take up of GNVQs in Wiltshire and JC gave a short brief.

DG produced a booklet on Progression 14 - 16 which could be made available to anyone interested.

DG mentioned two documents he is working on:

1 ) Case studies of people who have entered employment from GNVQ - at present he has case studies of 70 young people. He would like to market test a few of these and asked if he could bring some to the forum.

He would welcome any examples of employees or students in this area whoAll could be included.

2) Handbook re. vocational relevance using strategies, again including case studies. The present consortium will be included in this publication.

DG mentioned new materials which will be published in the New Year aimed at employers explaining GNVQs including how they relate to other qualifications.

Date of next meeting: 5 February 1997

4.00 p.m.

Bradon Forest School, The Peak,  
Purton, Swindon

### **ISSUES**

1) Key skills - What are they? Process as important as individual skills, i.e. managing own learning.

- Implications for schools and companies.

Schools - How will they be delivered

- Entitlement

- Levels

- Staff Training

- Resources

- NRA - Key skills being cross-referenced

### Companies - Induction Programmes

- Progression
- Liaison with schools
- Shared expertise

### 2) Vocational relevance within the National Curriculum

### 3) Funding/resources

### 4) Staff development and training

### 5) Inter-connectedness of proposals and developments - White Paper in December about 14 - 19 issues.

### 6) Role of TECs

### 7) Pace- Changes likely to occur at different times

### 8) Local partnerships

- links with business, Careers Service, etc.
- crucial to success

### 9) Framework of qualifications

- clarity and coherence
- reduction in number of qualifications
- types of qualifications

### 10) GNVQs and Key Skills

- UCAS will give preferential points to key skills
- profile for key skills achievement of UCAS form

### 1 1 ) Management

- within institutions
- local

### 1 2) Entitlement

### 1 3) Evaluation

### 14) Progression routes into employment - will lead to more collaborative relationships with ITOs and companies.

## EXAMPLES OF CURRENT STRATEGIES



- school based EBPs
  - Swindon Key Skills consortium
  - work experience enhancement
  - mentoring
  - joint schools induction/key skills/business context activities
  - formal partnerships, e.g. Warneford/Allied Dunbar/New College I.T.
- Accreditation - Wootton Bassett, GNVQ Part 1.

### Key Skills

25 September 1996.

#### **Present**

Viv Miles (VM) Allied Dunbar  
Barbara Duthie (BD) Allied Dunbar  
Gary Webb (GW) Allied Dunbar  
Jane Stones (JS) W H Smith  
Julian Neal (JN) W H Smith

Norma Adair (NA) Rover  
Julie Cathcart (JC) Wiltshire LEA  
Richard Cummins (RC) Wiltshire LEA  
Karen Lang (KL) Kingsdown School  
Bryan Jackson (BJ) Dorcan School  
Julia Shepard (JS) Bradon Forest School  
Steven Pike (SP) Lifetime Careers  
Joan Lardy (JL) Wiltshire TEC

#### **Resourcing**

RC reported that he had looked at opportunities for funding from the TEC and NCVQ.

Funding has been made available from GOSW to support key skills across the county. It was disappointing that when the tender came out from the TEC it did not tie in with any of the current activity. It was decided that there would be little point in tendering and the tender was duly awarded to a consortium of various FE Colleges. It is hoped that there may be some funding available from April '97 through the EBP.

The NCVQ are interested in what the present consortium is doing. RC has been asked to respond to a paper produced by a joint committee looking at Dearing,

specifically in the area of key skills. The NCVQ are asking for case studies about the activities in companies and their involvement in key skills projects. RC has been asked to talk about the activity in Swindon at conferences in other parts of the country.

### **Action**

VM asked about the criteria for funding through NCVQ. JC said budgets are closely set, however, historically in October NCVQ identify any unused money and then look for worthy projects to support - key skills is very high on the list. SP commented that he had recently attended an NCVQ seminar on maximising potential and key skills were a big issue.

JC explained how GEST funding worked. The funding allocation for 97/98 has identified key skills as something that needs to be addressed. The majority of schools in Wiltshire will benefit from the funding, mainly for the training of teachers.

SP commented that members of the present group have the opportunity to influence the expenditure of EBP funding - JC, RC, NA and SP are all members of various groups.

RC said that from April Swindon LEA are funding a new Business Liaison Unit which in effect will be a new EBP. There is every intention to work closely with Wiltshire in the future.

JC told the group that IT units are now available for KS4. BTEC are sponsoring a 1/2 day conference on 17 October at Kington Manor, near Chippenham - specialists who wrote the standards will be there to explain them.

### **School Internal Mapping Exercise**

#### **Dorcan School**

BJ has made an attempt to trawl each department for their ideas on where they see different aspects of key skills as most important.

Presentation skills were felt to be important for all year groups in English, Drama and Languages. History and Geography departments were interested in team and group working, and the Language and Drama departments also mentioned this as being of particular interest at Key Stage 4 (KS4). The Geography department mentioned problem solving at KS4, while the Science and Technology departments felt this was important right through the curriculum. Also accuracy/quality control skills were mentioned by the Language department.

\_IAction

bl~ to produce evidence from Kingsdown School but she agreed that the school would have similar comments.

I ~

\_ Bradon Forest School

~F JS had prepared a handout of some of the activities across the whole school which was distributed to the group - copy attached. She explained some of the activities, and reiterated her comment from the previous meeting about the problem of providing a quality experience for all students.

VM identified the problem of transferability of skills and felt that the way forward now was to identify common ground between school and company needs.

**Overlap and Resources - companies**W H Smith

JN said he did not yet have enough knowledge to comment. He explained the situation at W H Smith - there are many new people in new roles and many issues both long and short term to be considered. He has a lot of development work to do with staff in the short term. Competencies have been scrapped and new ones now have to be created. He can see however, that there may be an overlap in the areas of presentation skills, assertiveness and negotiation, and teamworking/team building. At present the company is more concerned with the immediate practical training needs internally, rather than longer term developmental needs. There is therefore not much overlap at present and not much available resource either.

### Allied Dunbar

GW said he had been working on exploring how the 'diluted process' could be addressed when he heard that BD had met RC to discuss how Allied Dunbar could work with teachers.

BD explained that there was a great deal of overlap in their training needs and Allied Dunbar is focusing on core skills, currently communication, presentation, influencing others and team working. She has training materials at Level 3 which need only a small amount of adapting before they would be suitable for education.

### Action

She made the comment that generally training with administrators and the sales force provokes change in the short term whereas training with managers has more long term effect. Would it therefore be most beneficial to target training at key teachers, working in partnership to develop a progressive programme of key skills?

VM said that Allied Dunbar has similar resourcing issues to W H Smith. He recommended that if only a small number of days are available the time should be spent on those people who will make the biggest impact. Allied Dunbar is currently going through restructuring and the process is forcing hesitancy about committing resources. There is the potential to offer two days and willingness to offer more if it becomes possible later.

Rover Rover has already identified where world class skills will lie - many are technical skills but also included those identified as GNVQ core skills.

Rover are starting the training with the Modern Apprentices working to Level 3 except for IT which will be to Level 2. RC and NA are working with 3rd Year apprentices in order to check on the validity of schools' and Rover's core skills standards.

There is much commonality but resourcing is an issue.

Rover have considered running training for Y 9 - 13 students starting with KS3 Presentations Skills; KS4 Communication Skills, Working with Others, and Presentation Skills; KS5 developing further KS4 skills.

NA commented that the group now seems to be looking at developing teachers and was in favour of this. SP said that employers would have the opportunity to reinforce their message to students through teachers, and that all would benefit.

JS said that the long term impact on students, of visit to companies, must not be underestimated. Suggested that other adults, e.g. governors could also be involved and used as an extra resource.

ere were ways th~t companies could benefit in real way - e.g. **Action** employees could assess stu.dents and collect evidence for their assessor awards. The TEC would be interested in the opportunity to raise knowledge of National Records of Achievement at KS3 and 4. If all students entering companies already had core skills it would be of great benefit to companies as they would then be able to concentrate on technical and job specific skills.

GW confirmed that the present commitment of Allied Dunbar to provide Presentation Skills training would continue, as would support of 'ad-hoc' events. He is still concerned with trying to find ways to expand this throughout the company and is considering presenting the involvement with schools as an opportunity to develop staff rather than as merely a request to support school activity. Swggested it might be helpful to put together a paper on "win-win" opportunities for education and companies.

In summing up RC said he felt that the general feeling of the meeting was to focus on teachers at present and this was agreed. VM confirmed the offer of two days time from Allied Dunbar. W H Smith are unlikely to be able to offer any resource before Christmas but would hope to be able to commit to the New Year. JN needs more information on core skills and the potential RC numbers involved - RC will contact him to arrange a briefing meeting. NA offered planning time before Christmas.

RC offered to provide link with Allied Dunbar. RC will co-ordinate a RC Planning Group to discuss the way forward and decide on the focus group of teachers (some options are one school/one faculty; two teachers from each school; one school/teachers from different subject areas). RC will liaise with schools about how they would like to be involved and what offers they are able to make to support the project.

JC asked who would produce the case studies. As he was involved in all the RC pilot days RC volunteered to do this in consultation with schools and company representatives involved.

Date of next meeting: Wednesday 20 November  
4.00 p.m.  
Kingsdown School, Hyde Road,  
Stratton St Margaret, Swindon

## Burma Castrol/Wootton Bassett/St Edmunds Schools Presentation Skills within a GNVQ Context

### Background

Wiltshire LEA has developed a support network of GNVQ Development Groups across the county along with training and support programme. Over a period of time schools and colleges identified a need for support in delivering and assessing key skills. In response to this an approach was made to the Training Department of Burma Castrol, initially to canvas opinion and to share ideas. Burma Castrol responded positively to this and it was agreed that Julie Norman, a training consultant with Burma Castrol, and Julie Cathcart and Richard Cummins from Wiltshire LEA would work together on a communication skills programme, focusing on presentation skills. The company does have a presentation skills course for its own employees but it was felt that it would be inappropriate to amend this and that a new course should be designed specifically for GNVQ students.

It was agreed to invite Year 12 Art & Design students from Wootton Bassett School and Year 9 students from St Edmunds School, who would be starting a Part I course in September. It was recognised that this would be quite a challenge, given the differences in age and experience.

Although the course would have an emphasis on presentation skills there would be an opportunity to work with others and it was agreed to build this into the course design.

### Programme Development

The course was being aimed at Art & Design GNVQ students so an element was identified which could be addressed as part of the course. The students would also require input about presentations and the opportunity to practise. The focus in the morning would be presentation skills and the afternoon Art & Design, culminating in a full-scale formal presentation.

### *Key Skills Course Study*

### Course

### Objectives

- to establish an understanding of the key elements of a presentation
- to develop knowledge and understanding of how to plan a presentation
- to increase the students skill levels in making presentations to both large and small groups
- to provide an opportunity for the students to have their achievements recognised, in relation to the appropriate national key skills criteria (as required for GNVQ)

### Programme

Welcome and introductions 10 minutes

Icebreaker/introductory activity 10 minutes

Preparation for a group presentation 20 minutes

Presentation I hour

Break 15 minutes

Input - what makes a good presentation (see Appendix 1) 20 minutes

Personal presentation - issues related to personal presentations 50 minutes for an interview

Lunch I hour

Using visual aids (see Appendix 2) 15 minutes

Presentation 250 minutes

Briefing for presentation 3

Preparation for presentation 3 I hour

*Key Skills Case Study*

Presentations 30 minutes

Feedback and plenary 20 minutes

This programme is designed for a group of 24 - 30 students working throughout the day in teams of 4 or 5. Inputs were made by the Burma Castrol trainer and each team of students had a process observer attached to them who debriefed each activity.

All the presentations were videoed.

### *Key Skills Case Study*

#### Presentation 2 Brief

Your personal presentation - how do you present yourself?

What are the things you should consider when you 'on display' - presenting or selling yourself? These occasions might include:

- how you look - your total appearance
- how you behave - from the moment you arrive

Prepare a 5 minute presentation to give the group.

### *Key Skills Case Study*

#### Presentation 3 Brief

##### Scenario

Burma Castrol organise a series of one week courses annually for its chief executives and their management teams called the Group Management Courses (GMC) Programme.

These are top level, strategic courses which cover the following areas:

- Castrol marketing
- Finance
- Managing people



- Chemicals marketing

The aim is to give delegates the specific knowledge and skills which can be related to the Burma Castrol corporate management policy.

The Group hold up to 15 courses every year and delegates are recruited from all parts of the world.

### Requirements

You are a member of a design team and have been asked to use your knowledge and expertise in art and design to devise an image which could be used as a logo or crest for the GMC programme.

The image is expected to appear on all the following items:

- the front cover of course folders
- delegate's name badges
- headed notepaper
- pens

The items will all form part of each delegate's pack at the conference where the courses are held.

### *Key Skills Case Study*

The image should also reflect the nature of the company, its corporate identity and its standing in the world market.

### *Key Skills Case Study*

### **Research Brief ( I hour time limit)**

Your team will need to:

- brainstorm ideas

- identify research materials to use for inspiration and information
- develop ideas which lead to good presentation roughs for **each** of the production requirements (folder, badge, notepaper and pen)
- prepare for group presentation to client (presentation time 10 minutes)

### *Key Skills Case Study*

Feedback from the day suggested that more time should be devoted to preparation for each presentation but recognised that this might be difficult in the time available. There were also suggestions that the first and second briefs could be swapped and that the visual aid input could come earlier.

Nevertheless the evaluations were very positive and teachers have reported subsequently on the increased confidence and ability of the students in making presentations.

The impact of working in a company environment with input from a business trainer was significant. The students made great efforts with their dress and had the opportunity to mix with company personnel at lunchtime. The working facilities and resources were impressive and the students talked positively about the experience for weeks afterwards. They were challenged throughout the day both in the tasks set for them and in adjusting to work with students from another schools.

The teachers gained from the opportunity to experience a focused and structured training day led by a business trainer. They were able to see how a course element could be delivered within a business setting at the same time as addressing two key skills. With the support provided they were able to gather evidence and assess the students. Finally the day led to a considerable amount of follow-up work at school and has continued to provide a useful reference point.

### *Key Skills Case Study* Appendix I

#### What makes a good presentation?

#### Points to consider

- Presentations have beginnings, middles and endings
- Who is your audience? - tailor your language
- What are your objectives?

- Preparation: Brainstorm

Order your material

Prune it

Structure it: Opening

Key areas 1, 2, 3 ...

Conclusions and summary

What questions might you be asked?

Visual aids

Prompt cards

REHEARSE!

- On the day: Check your material

Check the room layout

Check the equipment

BREATHE DEEPLY, SLOW DOWN!

- Afterwards: How did you do?

What might you change next time?

*Key Skills Case Study*

## Appendix 2

### Use and abuse of visual aids

- Visual aids should help you illustrate points, not take over and be the main focus

- Types of visual aid - when choosing, bear in mind the advantages and drawbacks of each
- Remember the 3Bs: Bold Brilliant
- Stick to the ABC of communication: Accurate Brief Clear • You are a visual aid!

#### **Appendix 8.8: Alternative Curriculum Project (Key stage level 4)**

The purpose of the project is to raise levels of attainment by developing a curriculum model which engages all stockholders, meets the needs of pupils, their local community and the broad society. The project is based on the two secondary schools in Swindon which exhibit the greatest social disadvantage and deprivation. In doing so, the first meeting with teachers held on 5th of December 1997. Rover Education Partnership manager explain about new initiatives which started from LEA and Industry in Swindon to improve the levels of skills of young people and motivate them to learning. She start with a question.

How do you evaluate the current Curriculum?

Teachers made following suggestions:

- Scrap national curriculum (bureaucracy, reliance on written outcomes)
- emotional based curriculum
- social education by specialists
- mutual support from staff/pupils/parents
- sustainability
- secondaries for schools sponsored by business
- Flexible modules
- non-timetable days
- school satellites with school as core industry and primary school

- cross-age curriculum
- curriculum driven by learning styles (e.g., academic , experiential ..)
- large number of motivated staff
- suitable sources( transport, specialist staff)
- matching fund from business
- support from parents/other involved adults
- recognition of worth of scheme by business/college of FE/LEA /DfEE
- can-do" success model

### **Appendix 8.9: A Study of pupils views about schooling**

A. This project was going to consider the pupils expectations and views about the curriculum and school. There were twelve pupils, five girls and seven boys, age around thirteen and on stage level three from the Oakfield school.

After a warm welcome following activities were undertaken.

- Pupils in pairs found out - name ; - what did they think of school?; - and who's their favourite pop/TV/sport? ; pupils are asked to introduce their friends who was sitting close to him/her.
- The teacher and councilor view explained why pupils came to Rover Group Partnership.
- Pupils were asked what kind of courses they more like? or why and what make it worthwhile?
 

• Physical Education(PE)	11
• History	9
• Music	8 (if present teacher changed)
• Drama	8
• Art	8
• Design and Technology(DT)	8
• Science	8
• English language	7
• Math	6
• Geography	6
• German Language	5
• French Language	

The reasons of pupils which what make it interesting were :

- good work(DT)
- complication (DT)
- mostly play game and sport (PE)
- work together (PE, DT)
- healthy (PE)
- fun and laugh (Drama)
- enjoy anything (Art)

·A game was runningteacher.Pupils divided into two group and played the icesking competition.

.

·then pupils are asked to specified what hinted them to reach the target?

Answers of pupils were;

·shouting all at once; bad communication; not listening by all group; individuals differences;

·what is your aims or goals at school?

- |                         |                 |
|-------------------------|-----------------|
| achievement             | - getting a job |
| - be known of something | - life          |
| - better education      | - money         |
| - knowledge             |                 |

·what do you care about? Pupils individually asked to drawing the matters they more care about. the results was;

- trees
- pets
- animals  
(horses, fox)
- food
- tress and  
pollution
- cartoons
- football
- environment  
and recycling
- family
- job
- money
- friends

·Just imagine if you could a perfect day at school, what type of activity do you prefer?

The answers were;

1. innovation for easy life
2. learning for life
3. start school later
- no school uniform
4. two days for going school are enough
5. travel to learn geography and history
6. choice of lesson
7. going to swimming pool
8. music
9. no governor to get spell out
10. art, physical Education
11. working as a group

#### B. Pupils perceptions

This project was going to consider the student expectations and views about the curriculum and school. There were 4 students, two girls and two boys, age around thirteen and on the stage level three from the Oakfield school.

After a warm welcome following activities were undertaken.



- Students in pairs found out the
  - name
  - what did they think of school?
  - and who's their favourite pop/TV/sport?
  - students are asked to introduce their friends who was sitting close to him/her.
- The teacher and counsellant view explained why student came to Rover Group Partnership.
- Students were asked what kind( how much) of courses they more like, and rank courses from one to ten ? why and what make it worthwhile?

Course	Mean
• Cooking	• 10
• Physical Education(PE)	• 10
• PD 9.5	• 9.5
• Science9	• 9
• Games8.5	• 8.5
• Drama7.5	• 7.5
• Design and Technology(DT)7.1	• 7.1
• Art7	• 7
• world of work6	• 6
• History4.2	• 4.2
• Music 4.2	• 4.2
• English language4.1	• 4.1
• Math4	• 4
• Geography4	• 4
• French Language2	• 2

Students were asked if you have got only two choices which one do you prefer?

- PE 3 student
- Games 2 student
- cooking 2 student
- PD 2 student

The reasons of student which what make it uninteresting were :

- some of the teachers shouting, smoking, grabbing and unfair.
- it is difficult (Music)
- too noisy (Drama)

- A game was running . students are asked to circle a ball around . The referee took the time and following results comes out.
  - in the first round it took 18 second
  - in the second round it took 9 second
  - in the third round it took 4 second
  - in the fourth round it took 3 second
  - in the fifth round it took 1 second

- in the six roun it took .05 second

Answers of studens for their sucsee in decreasing time were;

1. help each other
  2. responsibility
  3. all involved
  4. all idea together
  5. times and steps seen
- What thinhs out of school most enjoy you?
    - play footbal
    - icesking
    - youth club
    - horse riding
    - mountain biking
  - What would you like to be?
    - work carrer with children
    - singing and hairdress
    - football player
    - foster carer
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